



FIG. 1

| | 1 | 10 | 20 | 30 | 40 | 50 | 60 |
|------|-------------|------------|-------------|------------|------------|-------------|------|
| 1 | AATGCTACTA | CTATTAGTAG | AATTGATGCC | ACCTTTTCAG | CTCGCGCCCC | AAATGAAAAAT | 60 |
| 61 | ATAGCTAAAC | AGGTTATTGA | CCATTTGCGA | AATGTATCTA | ATGGTCAAAC | TAAATCTACT | 120 |
| 121 | CGTTCCGAGA | ATTGGGAATC | AACTGTTACA | TGGAATGAAA | CTTCCAGACA | CCGTACTTTA | 180 |
| 181 | GTTGCATATT | TAAAACATGT | TGAGCTACAG | CACCAGATTC | AGCAATTAAG | CTCTAAGCCA | 240 |
| 241 | TCTGCAAAAA | TGACCTCTTA | TCAAAAGGAG | CAATTAAGAG | TACTCTCTAA | TCCTGACCTG | 300 |
| 301 | TTGGAGTTTG | CTTCCGGTCT | GGTTTCGCTT | GAAGCTCGAA | TTAAAACGCG | ATATTTGAAG | 360 |
| 361 | TCCTTCGGGC | TTCTCTTAA | TCTTTTGAT | GCAATCCGCT | TTGCTTCTGA | CTATAATAGT | 420 |
| 421 | CAGGATAAAG | ACCTGATTTT | TGATTTATGG | TCATTCTCGT | TTTCTGAAC | GTTTAAAGCA | 480 |
| 481 | TTTGAGGGGG | ATTCAATGAA | TATTTATGAC | GATTCCGCGA | TATTGGACGC | TATCCAGTCT | 540 |
| 541 | AAACATTTTA | CTATTACCCC | CTCTGGCAAA | ACTTCTTTTG | CAAAAGCCTC | TCGCTATTTT | 600 |
| 601 | GGTTTTTATC | GTCGTCTGGT | AAACGAGGGT | TATGATAGTG | TTGCTCTTAC | TATGCCTCGT | 660 |
| 661 | AATTCCTTTT | GGCGTTATGT | ATCTGCATTA | GTTGAATGTG | GTATTCCTAA | ATCTCAACTG | 720 |
| 721 | ATGAATCTTT | CTACCTGTAA | TAATGTTGTT | CCGTTAGTTC | GTTTTATTAA | CGTAGATTTT | 780 |
| 781 | TCCTCCCAAC | GTCCTGACTG | GTATAATGAG | CCAGTTCCTA | AAATCGCATA | AGGTAATCTA | 840 |
| 841 | CAATGATTTA | AGTTGAAATT | AAACCATCTC | AAGCCCAATT | TACTACTCGT | TCTGGTGTTT | 900 |
| 901 | CTCGTCAGGG | CAAGCCTTAT | TCACTGAATG | AGCAGCTTTG | TTACGTTGAT | TTGGGTAATG | 960 |
| 961 | AATATCCGGT | TCTTGTCAAG | ATTACTCTTG | ATGAAGGTCA | GCCAGCCTAT | GCGCCTGGTC | 1020 |
| 1021 | TGTACACCGT | TCATCTGTCC | TC-TTTCAAAG | TTGGTCAGTT | CGGTTCCCTT | ATGATTGACC | 1080 |
| 1081 | GTCTGCGCCT | CGTTCCGGCT | AAGTAACATG | GAGCAGGTCT | CGGATTTCTA | CACAATTTAT | 1140 |
| 1141 | CAGGCGATGA | TACAAATCTC | CGTTGTACTT | TGTTTCGCGC | TTGGTATAAT | CGCTGGGGGT | 1200 |
| 1201 | CAAAGATGAG | TGTTTTAGTG | TATTTCTTCG | CCTCTTTTCG | TTTAGGTTGG | TGCCTTCGTA | 1260 |
| 1261 | GTGGCATTAC | GTATTTTACC | CGTTTAAATG | AAACTTCCTC | ATGAAAAAGT | CTTTAGTCTT | 1320 |
| 1321 | CAAAGCCTCT | GTAGCCGTTG | CTACCCTCGT | TCCGATGCTG | TCTTTTCGCT | CTGAGGGTGA | 1380 |
| 1381 | CGATCCCGCA | AAAGCGGCCT | TTAACTCCCT | GCAAGCCTCA | GCGACCGAAT | ATATCGGTTA | 1440 |
| 1441 | TGCGTGGGCG | ATGGTGTGTT | TCATTGTCTG | CGCAACTATC | GGTATCAAGC | TGTTTAAAGAA | 1500 |
| 1501 | ATTACCTCTG | AAAGCAAGCT | GATAAACCGA | TACAATTAAG | GGCTCCTTTT | GGAGCCTTTT | 1560 |
| 1561 | TTTTTGAGAG | TTTTCAACGT | GAAAAAATTA | TTATTCGCAA | TTCTTTTATG | TGTTCCITTC | 1620 |
| 1621 | TATTTCTCACT | CCGCTGAAAC | TGTTGAAAGT | TGTTTAGCAA | AAACCCATAC | AGAAAAATTC | 1680 |
| 1681 | TTTACTAACG | TCTGGAAAGA | CGACAAAAC | TTAGATCGTT | ACGCTAATA | TGAGGGTTGT | 1740 |
| 1741 | CTGTGGAATG | CTACAGGCGT | TGTAGTTTGT | ACTGGTGACG | AAACTCAGTG | TTACGGTACA | 1800 |
| 1801 | TGGGTTTCTA | TTGGGCTTGC | TATCCCTGAA | AATGAGGGTG | GTGGCTCTGA | GGGTGGCGGT | 1860 |
| 1861 | TCTGAGGGTG | GCGGTTCTGA | GGGTGGCGGT | ACTAAACCTC | CTGAGTACGG | TGATACACCT | 1920 |
| 1921 | ATTCGGGGCT | ATACTTATAT | CAACCTCTC | GACGGCACTT | ATCCGCTTGG | TACTGAGCAA | 1980 |
| 1981 | AAECCCGCTA | ATCCTAATCC | TTCTCTTGAG | GAGTCTCAGC | CTCTTAATAC | TTTCTAGTTT | 2040 |
| 2041 | CAGAATAATA | GGTTCCGAAA | TAGGCAGGGG | GCAATTAACG | TTTATACGGG | CACTGTTACT | 2100 |
| 2101 | CAAGGCACTG | ACCCCGTTAA | AACTTATTAC | CAGTACACTC | CTGTATCATC | AAAAGCCATG | 2160 |
| 2161 | TATGACGCTT | ACTGGAACGG | TAAATTGAGA | GACTGCGCTT | TCCATTCTGG | CTTTAATGAA | 2220 |
| 2221 | GATCCATTCT | TTTGTGAATA | TCAAGGCCAA | TCGTCTGACC | TGCCTCAACC | TCCTGTCAAT | 2280 |
| 2281 | GCTGGCGGCG | GCTCTGGTGG | TGGTTCTGGT | GGCGGCTCTG | AGGGTGGTGG | CTCTGAGGGT | 2340 |
| 2341 | GGCGGTTCTG | AGGGTGGCGG | CTCTGAGGGA | GGCGGTTCCG | GTGGTGGCTG | TGGTTCCGGT | 2400 |
| 2401 | GATTTTGAAT | ATGAAAAGAT | GGCAAAACGT | AATAAGGGGG | CTATGACCGA | AAATGCCGAT | 2460 |
| 2461 | GAAAAACGCG | TACAGTCTGA | CGCTAAAGGC | AAACTTGATT | CTGTCGCTAC | TGATTACGGT | 2520 |
| 2521 | GCTGCTATCG | ATGGTTTCAT | TGGTGACGTT | TCCGGCCTTG | CTAATGGTAA | TGGTGCTACT | 2580 |
| 2581 | GGTGATTTTG | CTGGCTCTAA | TTCCCAAATG | GCTCAAGTCG | GTGACGGTGA | TAATTCACCT | 2640 |
| 2641 | TTAATGAATA | ATTTCCGTCA | ATATTTACCT | TCCCTCCCTC | AATCGGTTGA | ATGTCGCCCT | 2700 |
| 2701 | TTTGTCTTTA | GCGCTGGTAA | ACCATATGAA | TTTTCTATTG | ATTGTGACAA | AATAAACTTA | 2760 |
| 2761 | TTCCGTGGTG | TCTTTGCGTT | TCTTTTATAT | GTTGCCACCT | TTATGTATGT | ATTTTCTACG | 2820 |
| 2821 | TTTGCTAACA | TACTGCGTAA | TAAGGAGTCT | TAATCATGCC | AGTTCTTTTG | GGTATTCCGT | 2880 |
| 2881 | TATTATTGCG | TTTCTCTGGT | TTCCTTCTGG | TAACTTTGTT | CGGCTATCTG | CTTACTTTTC | 2940 |
| 2941 | TTAAAAAGGG | CTTCGGTAAG | ATAGCTATTG | CTATTTTCAT | GTTTCTTGCT | CTTATTATTG | 3000 |

FIG. 2A

| | 1 | 10 | 20 | 30 | 40 | 50 | 60 | |
|------|------------|-----------|-----------|-----------|-----------|-----------|------|--|
| 3001 | GGCTTAAC | AATTCCTT | GGTTATCT | CTGATATT | CGCTCAATT | CCCTCTGA | 3060 | |
| 3061 | TTGTTTCA | TGTTTCA | ATTCTCCG | CTAATGCG | TCCCTGT | TATGTTAT | 3120 | |
| 3121 | TCTCTGTAA | GGCTGCTA | TTTCAATTT | ACGTAAACA | AAAAATCG | TCTTATTT | 3180 | |
| 3181 | ATTGGGATA | ATAATATG | TGTTTATTT | GTAAGTGG | AATTAGGCT | TGGAAAGAC | 3240 | |
| 3241 | CTCGTTAGC | TTGGTAAG | TCAGGATA | ATTGTAGCT | GGTGCAAA | AGCAACTAA | 3300 | |
| 3301 | CTTGATTTA | GGCTTCAAA | CCTCCCGCA | CTCGGGAGG | TCGCTAAAC | GCCTCGCG | 3360 | |
| 3361 | CTTAGAATA | CGGATAAG | TTCTATAT | GATTTGCTT | CTATTGGGC | CGGTAATGA | 3420 | |
| 3421 | TCCTACGAT | AAAATAAAA | CGGCTTGCT | GTTCCTCG | AGTGCGGT | TTGGTTTAA | 3480 | |
| 3481 | ACCCGTTCT | GGAATGATA | GGAAAGAC | CCGATTATT | ATTGGTTTC | ACATGCTCG | 3540 | |
| 3541 | AAATTAGGA | GGGATATT | TTTTCTTG | CAGGACTTA | CTATTGTTG | TAAACAGGC | 3600 | |
| 3601 | CGTTCTGCA | TAGCTGAAC | TGTTGTTT | TGTCGTCG | TGGACAGA | TACTTTAC | 3660 | |
| 3661 | TTTGTGCG | CTTTATAT | TCTTATTA | GGCTCGAAA | TGCCTCTG | TAAATTACA | 3720 | |
| 3721 | GTTGGCGTT | TAAATATGG | CGATTCTCA | TTAAGCCCT | CTGTTGAGC | TTGGCTTT | 3780 | |
| 3781 | ACTGGTAAG | ATTTGTATA | CGCATATGA | ACTAAACAG | CTTTTCTAG | TAATTATGA | 3840 | |
| 3841 | TCCGGTGT | ATTCTTAT | AACGCCTT | TTATCACAC | GTCGGTAT | CAAACCAT | 3900 | |
| 3901 | AAATTAGGT | AGAAGATGA | GCTTACTAA | ATATATTTG | AAAAGTTTC | ACGCGTCT | 3960 | |
| 3961 | TGCTCTGCG | TTGGATTTC | ATCAGCAT | ACATATAGT | ATATAACCC | ACCTAAGCC | 4020 | |
| 4021 | GAGGTAAAA | AGGTAGTCT | TCAGACCT | GATTTTGAT | AATTCACAT | TGACTCTTC | 4080 | |
| 4081 | CAGCGTCTT | ATCTAAGCT | TCGCTATGT | TTCAAGGAT | CTAAGGGAA | ATTAATTA | 4140 | |
| 4141 | AGCGACGAT | TACAGAAGC | AGGTTATTC | CTCACATAT | TTGATTTAT | TACTGTTTC | 4200 | |
| 4201 | ATTAATAA | GTAATTCAA | TGAAATTGT | AAATGTAAT | AATTTTGTT | TCTTGATGT | 4260 | |
| 4261 | TGTTTTCAT | TCTTCTTT | CTCAGGTA | TGAAATGA | AATTCGCCT | TGCGCGATT | 4320 | |
| 4321 | TGTAACCTG | TATTCAAAG | AATCAGGCG | ATCCGTTAT | GTTTCTCCG | ATGTAAGAG | 4380 | |
| 4381 | TACTGTTAC | GTATATTC | CTGACGTT | ACCTGAAAT | CTACGCAAT | TCTTTATTC | 4440 | |
| 4441 | TGTTTTACG | GCTAATAAT | TTGATATGT | AGTTTCAAT | CCTTCCATA | TTCAGAAGT | 4500 | |
| 4501 | TAATCCAAA | AATCAGGAT | ATATTGATG | ATTGCCATC | TCTGATAAT | AGGAATATG | 4560 | |
| 4561 | TGATAATTCC | GCTCCTTCT | GTGGTTTCT | TGTTCCGCA | AATGATAAT | TTACTCAAA | 4620 | |
| 4621 | TTTTAAAT | AATAACGTT | GGGCAAGGA | TTTAATACG | GTTGTGCA | TGTTTGTA | 4680 | |
| 4681 | GTCTAATA | TCTAAATCT | CAAAATGT | ATCTATTG | GGCTCTAAT | TATTTAGTG | 4740 | |
| 4741 | TAGTGACCT | AAAGATATT | TAGATAAC | TCCTCAAT | CTTTCTACT | TTGATTTGC | 4800 | |
| 4801 | AACTGACCA | ATATTGATT | AGGGTTTGT | ATTTGAGGT | CAGCAAGGT | ATGCTTTAG | 4860 | |
| 4861 | TTTTTCAT | GCTGCTGG | CTCAGCGTG | CACTGTTGC | GGCGGTGTT | ATACTGACC | 4920 | |
| 4921 | CCTCACCTC | GTTTATCT | CTGCTGGTG | TTGCTTCGG | ATTTTAAAT | GCGATGTTT | 4980 | |
| 4981 | AGGGCTATC | GTTGCGCAT | TAAAGACT | TAGCCATT | AAAAATATT | CTGTGCCAC | 5040 | |
| 5041 | TATTCCTAC | CTTTCAGGT | AGAAGGGTT | TATCTCTGT | GGCCAGAAT | TCCCTTTT | 5100 | |
| 5101 | TACTGGTCG | GTGACTGGT | AATCTGCCA | TGTAATAAT | CCATTTTCA | CGATTGAGC | 5160 | |
| 5161 | TCAAAATGT | GGTATTTCC | TGAGCGTTT | TCCTGTTGA | ATGGCTGGC | GTAATATTG | 5220 | |
| 5221 | TCTGGATAT | ACCAGCAAG | CCGATAGTT | GAGTTCCT | ACTCAGGCA | GTGATGTT | 5280 | |
| 5281 | TACTAATCA | AGAAGTATT | CTACAACGG | TAATTTGCG | GATGGACAG | CTCTTTTAC | 5340 | |
| 5341 | CGGTGGCCT | ACTGATTAT | AAAACACT | TCAAGATT | GGCGTACCG | TCCTGTCTA | 5400 | |
| 5401 | AATCCCTTT | ATCGGCCTC | TGTTTAGCT | .CCGCTCTG | TCCAACGAG | AAAGCACGT | 5460 | |
| 5461 | ATACGTGCT | GTCAAAGCA | CCATAGTAC | CGCCCTGT | CGGCGCATT | AGCGCGGCG | 5520 | |
| 5521 | GTGTGGTGG | TACGCGCAG | GTGACCGTA | CACTTGCC | CGCCCTAGC | CCCGCTCCT | 5580 | |
| 5581 | TCGCTTTCT | CCCTTCCTT | CTCGCCACG | TCGCGGCT | TCCCGTCAA | GCTCTAAAT | 5640 | |
| 5641 | GGGGGCTCC | TTTAGGGTT | CGATTTAGT | CTTTACGGC | CCTCGACCC | AAAAAACT | 5700 | |
| 5701 | ATTTGGGTG | TGGTTCACG | AGTGGGCC | CGCCCTGAT | GACGGTTTT | CGCCCTTT | 5760 | |
| 5761 | CGTTGGAGT | CACGTTCTT | AATAGTGG | CTTTGTTCC | AACTGGAAC | ACACTCAAC | 5820 | |
| 5821 | CTATCTGGG | CTATTCCTT | GATTTATA | GGATTTTGC | GATTTTCGA | CCACCATCA | 5880 | |
| 5881 | ACAGGATTT | CGCCTGCTG | GGCAAACCA | CGTGGACCG | TTGCTGCA | TCTCTCAGG | 5940 | |
| 5941 | CCAGGCGGT | AAGGCAATC | AGCTGTTGC | CGTCTCGCT | GTGAAAAG | AAACCACCT | 6000 | |

FIG. 2B

| | 10 | 20 | 30 | 40 | 50 | 60 | |
|------|-------------|-------------|------------|------------|------------|-------------|------|
| 6001 | GGCGCCCAAT | ACGCAAACCG | CCTCTCCCCG | CGCGTTGGCC | GATTCATTAA | TGCAGCTGGC | 6060 |
| 6061 | ACGACAGGTT | TCCCGACTGG | AAAGCGGGCA | GTGAGCGCAA | CGCAATTAAT | GTGAGTTAGC | 6120 |
| 6121 | TCACCTATTA | GGCACCCAG | GCTTTACACT | TTATGCTTCC | GGCTCGTATG | TTGTGTGGAA | 6180 |
| 6181 | TTGTGAGCGG | ATAACAATTT | CACACGCGTC | ACTTGGCACT | GGCCGTCGTT | TTACAACGTC | 6240 |
| 6241 | GTGACTGGGA | AAACCCTGGC | GTTACCCAAG | CTTTGTACAT | GGAGAAAATA | AAAGTAAACA | 6300 |
| 6301 | AAGCACTATT | GCACTGGCAC | TCTTACCGTT | ACCGTTACTG | TTTACCCCTG | TGACAAAAGC | 6360 |
| 6361 | CGCCCAGGTC | CAGCTGCTCG | AGTCAGGCCT | ATTGTGCCCA | GGGGATTGTA | CTACTGGATC | 6420 |
| 6421 | CTAGGCTGAA | GGCGATGACC | CTGCTAAGGC | TGCATTCAAT | AGTTTACAGG | CAAGTGCTAC | 6480 |
| 6481 | TGAGTACATT | GGCTACGCTT | GGGCTATGGT | AGTAGTTATA | GTTGGTGCTA | CCATAGGGAT | 6540 |
| 6541 | TAAATTATTC | AAAAAGTTTA | CGAGCAAGGC | TTCTTAAGCA | ATAGCGAAGA | GGCCCGCACC | 6600 |
| 6601 | GATCGCCCTT | CCCAACAGTT | GCGCAGCCTG | AATGGCGAAT | GGCGCTTTGC | CTGGTTTCCG | 6660 |
| 6661 | GCACCAAGAAG | CGGTGCCGGA | AAGCTGGCTG | GAGTGCGATC | TTCTGAGGCG | CGATACGGTC | 6720 |
| 6721 | GTCGTCCCCT | CAAACTGGCA | GATGCACGGT | TACGATGCGC | CCATCTACAC | CAACGTAACC | 6780 |
| 6781 | TATCCCATTA | CGGTCAATCC | GCCGTTTGTT | CCCACGGAGA | ATCCGACGGG | TTGTTACTCG | 6840 |
| 6841 | CTCACATTTA | ATGTTGATGA | AAGCTGGCTA | CAGGAAGGCC | AGACGCGAAT | TATTTTGTAT | 6900 |
| 6901 | GGCGTTCCTA | TTGGTTAAAA | AATGAGCTGA | TTTAACAAAA | ATTTAACGCG | AATTTTAAACA | 6960 |
| 6961 | AAATATTAAC | GTTTACAATT | TAAATATTTG | CTTATACAAT | CTTCCTGTTT | TTGGGGCTTT | 7020 |
| 7021 | TCTGATTATC | AACCGGGGTA | CATATGATTG | ACATGCTAGT | TTTACGATTA | CCGTTTCATCG | 7080 |
| 7081 | ATTCTCTTGT | TTGCTCCAGA | CTCTCAGGCA | ATGACCTGAT | AGCCTTTGTA | GATCTCTCAA | 7140 |
| 7141 | AAATAGCTAC | CCTCTCCGGC | ATTAATTTAT | CAGCTAGAAC | GGTTGAATAT | CATATTGATG | 7200 |
| 7201 | GTGATTTGAC | TGTCTCCGGC | CTTTCTCACC | CTTTTGAATC | TTTACCTACA | CATTACTCAG | 7260 |
| 7261 | GCATTGCATT | TAAAAATATAT | GAGGGTTCTA | AAAATTTTTA | TCCTTGCGTT | GAAATAAAGG | 7320 |
| 7321 | CTTCTCCCGC | AAAAGTATTA | CAGGGTCATA | ATGTTTTTGG | TACAACCGAT | TTAGCTTTAT | 7380 |
| 7381 | GCTCTGAGGC | TTTATTGCTT | AATTTTGCTA | ATTCCTTGCC | TTGCCTGTAT | GATTTATTGG | 7440 |
| 7441 | ACGTT | | | | | | 7445 |

FIG. 2C

| | 1 | 10 | 20 | 30 | 40 | 50 | 60 | |
|------|-------------|-------------|-------------|-------------|------------|-------------|------|--|
| 1 | AATGCTACTA | CTATTAGTAG | AATTGATGCC | ACCTTTTCAG | CTCGCGCCCC | AAATGAAAAT | 60 | |
| 61 | ATAGCTAAAC | AGGTTATTGA | CCATTTGCGA | AATGTATCTA | ATGGTCAAAC | TAAATCTACT | 120 | |
| 121 | CGTTTCGAGA | ATTGGGAATC | AACTGTTACA | TGGAATGAAA | CTTCCAGACA | CCGTACTTTA | 180 | |
| 181 | GTTGCATATT | TAAACATGT | TGAGCTACAG | CACCAGATTG | AGCAATTAAG | CTCTAAGCCA | 240 | |
| 241 | TCCGCAAAAA | TGACCTCTTA | TCAAAAGGAG | CAATTAAGG | TACTCTCTAA | TCCTGACCTG | 300 | |
| 301 | TTGGAGTTTG | CTTCCGGTCT | GGTTTCGCTT | GAAGCTCGAA | TAAACCGCG | ATATTTGAAG | 360 | |
| 361 | TCTTTTCGGG | TTCTCTTTAA | TCTTTTGTAT | GCAATCCGCT | TTGCTTCTGA | CTATAATAGT | 420 | |
| 421 | CAGGGTAAAG | ACCTGATTTT | TGATTTATGG | TCATTCTCGT | TTTCTGAAC | GTTTAAAGCA | 480 | |
| 481 | TTTGAGGGGG | ATTCAATGAA | TATTTATGAC | GATTCCGCG | TATTGGACGC | TATCCAGTCT | 540 | |
| 541 | AAACATTTTA | CTATTACCCC | CTCTGGCAAA | ACTTCTTTTG | CAAAAGCCTC | TCGCTATTTT | 600 | |
| 601 | GGTTTTTATC | GTGCTCTGGT | AAACGAGGGT | TATGATAGTG | TTGCTCTTAC | TATGCCTCGT | 660 | |
| 661 | AATTCCCTTT | GGCGTTATGT | ATCTGCATTA | GTTGAATGTG | GTATTCCTAA | ATCTCAACTG | 720 | |
| 721 | ATGAATCTTT | CTACCTGTAA | TAATGTTGTT | CCGTTAGTTC | GTTTTATTAA | CGTAGATTTT | 780 | |
| 781 | GTGGCCCAAC | GTCCTGACTG | GTATAATGAG | CCAGTTCTTA | AAATCGCATA | AGGTAATTCA | 840 | |
| 841 | CAATGATTAA | AGTTGAAATT | AAACCATCTG | AAGCCCAATT | TACTACTCGT | TCTGGTGTTC | 900 | |
| 901 | CTCGTCAGGG | CAAGCCTTAT | TCACTGAATG | AGCAGCTTTG | TTACGTTGAT | TTGGGTAATG | 960 | |
| 961 | AATATCCGGT | TCTTGTCAAG | ATTACTCTTG | ATGAAGGTCA | GCCAGCCTAT | GCGCCTGGTC | 1020 | |
| 1021 | TGTACACCGT | TCATCTGTCC | TCTTTCAAAG | TTGGTCAGTT | CGGTTCCCTT | ATGATTGACC | 1080 | |
| 1081 | GTCTGCGCCT | CGTTCCGGCT | AAGTAACATG | TATGACGGTC | CGGATTTTCA | CACAATTTAT | 1140 | |
| 1141 | CAGGCGATGA | TACAAATCTC | CGTTGTACTT | TGTTTCGCGC | TTGGTATAAT | CGCTGGGGGT | 1200 | |
| 1201 | CAAAGATGAG | TGTTTTAGTG | TATTTCTTTC | CCTCTTTTCG | TTTAGGTTGG | TGCTTTCGTA | 1260 | |
| 1261 | GTGGCATTAC | GTATTTTACC | CGTTAATGG | AAACTTCCTC | ATGAAAAAGT | CTTTAGTCTT | 1320 | |
| 1321 | CAAAGCCTCT | GTAGCCGTTG | CTACCTCTGT | TCCGATGCTG | TCTTTCGCTG | CTGAGGGTGA | 1380 | |
| 1381 | CGATCCCGCA | AAAGCGGCCT | TTAACTCCCT | GCAAGCCTCA | GCGACCGAAT | ATATCGGTTA | 1440 | |
| 1441 | TGCGTGGGCG | ATGGTTGTTG | TCATTGTGCG | CGCAACTATC | GGTATCAAGC | TGTTTAAAGAA | 1500 | |
| 1501 | ATTACACCTG | AAAGCAAGCT | GATAAACCGA | TACAATTAAA | GGCTCCTTTT | GGAGCCTTTT | 1560 | |
| 1561 | TTTTTGGAGA | TTTTCAACGT | GAAAAAATTA | TTATTCGCAA | TTCTTTAGT | TGTTCTTTTC | 1620 | |
| 1621 | TATTTCTACT | CCGCTGAAAC | TGTTGAAAGT | TGTTTAGCAA | AACCCCATAC | AGAAAATTCA | 1680 | |
| 1681 | TTTACTAACG | TCTGGAAAGA | CGACAAAAC | TTAGATCGTT | ACGCTAACTA | TGAGGGTTGT | 1740 | |
| 1741 | CTGTGGGAATG | CTACAGGCGT | TGTAGTTTGT | ACTGGTGACG | AAACTCAGTG | TTACGGTACA | 1800 | |
| 1801 | TGGGTTCTTA | TTGGGCTTGC | TATCCCTGAA | AATGAGGGTG | GTGGCTCTGA | GGGTGGCGGT | 1860 | |
| 1861 | TCTGAGGGTG | GCGGTTCTGA | GGGTGGCGGT | ACTAAACCTC | CTGAGTACGG | TGATACACCT | 1920 | |
| 1921 | ATTCGGGGCT | ATACCTTAT | CAACCTCTC | GACGGCACTT | ATCCGCCTGG | TACTGAGCAA | 1980 | |
| 1981 | AACCCCGCTA | ATCCTAATCC | TTCTCTTGAG | GAGTCTCAGC | CTCTTAATAC | TTTCATGTTT | 2040 | |
| 2041 | CAGAATAATA | GGTTCCGAAA | TAGGCAGGGG | GCATTAACCTG | TTTATACGGG | CACTGTTACT | 2100 | |
| 2101 | CAAGGCACTG | ACCCCGTTAA | AACTTATTAC | CAGTACACTC | CTGTATCATC | AAAAGCCATG | 2160 | |
| 2161 | TATGACGCTT | ACTGGAACGG | TAAATT.CAGA | GACTGCGCTT | TCCATTCTGG | CTTTAATGAA | 2220 | |
| 2221 | GATCCATTCTG | TTTGTGAATA | TCAAGGCCAA | TCGCTTGACC | TGCCTCAACC | TCCTGTCAAT | 2280 | |
| 2281 | GCTGGCGGCG | GCTCTGGTGG | TGGTTCTGGT | GGCGGCTCTG | AGGGTGGTGG | CTCTGAGGGT | 2340 | |
| 2341 | GGCGGTTCTG | AGGGTGGCGG | CTCTGAGGGA | GGCGGTTCCG | GTGGTGGCTC | TGGTTCCGGT | 2400 | |
| 2401 | GATTTTGATT | ATGAAAAGAT | GGCAACCGCT | AATAAGGGGG | CTATGACCGA | AAATGCCGAT | 2460 | |
| 2461 | GAAAACGCGC | TACAGTCTGA | CGCTAAAGGC | AAACTTGATT | CTGTGCTTAC | TGATTACGGT | 2520 | |
| 2521 | GCTGCTATCG | ATGGTTTTCAT | TGGTGACGTT | TCCGGCCTTG | CTAATGGTAA | TGGTGCTACT | 2580 | |
| 2581 | GGTGATTTTG | CTGGCTCTAA | TTCCCAAATG | GCTCAAGTCG | GTGACGGTGA | TAATTCACCT | 2640 | |
| 2641 | TTAATGAATA | ATTTCCGTC | ATATTTACCT | TCCCTCCCTC | AATCGGTTGA | ATGTCGCCCT | 2700 | |
| 2701 | TTTGTCTTTA | GCGCTGGTAA | ACCATATGAA | TTTTCTATTG | ATTGTGACAA | AATAAACTTA | 2760 | |
| 2761 | TTCCGTTGGT | TCTTTGCGTT | TCTTTTATAT | GTTGCCACCT | TTATGTATGT | ATTTTCTACG | 2820 | |
| 2821 | TTTGCTAACA | TACTGCGTAA | TAAGGAGTCT | TAATCATGCC | AGTTCTTTTG | GGTATTCGGT | 2880 | |
| 2881 | TATTATTGCG | TTTCTCTGGT | TTCTTCTGG | TAACTTTGTT | CGGCTATCTG | CTTACTTTTC | 2940 | |
| 2941 | TAAAAAAGGG | CTTCGGTAAG | ATAGCTATTG | CTATTTTCATT | GTTTCTTGCT | CTTATTATTG | 3000 | |

FIG. 3A

| | 10 | 20 | 30 | 40 | 50 | 60 | |
|------|-------------|-------------|-------------|-------------|------------|------------|------|
| 3001 | GGCTTAACTC | AATTCTTG TG | GGTTATCTCT | CTGATATTAG | CGCTCAATTA | CCCTCTGACT | 3060 |
| 3061 | TTGTTCAAGG | TGTTCAAGTTA | ATTCTCCCGT | CTAATGCGCT | TCCCTGTTTT | TATGTTATTC | 3120 |
| 3121 | TCTCTGTAAA | GGCTGCTATT | TTCATTTTTG | ACGTTAAACA | AAAAATCGTT | TCTTATTTGG | 3180 |
| 3181 | ATTGGGATAA | ATAAATATGG | TGTTTATTTT | GTAAC TGGA | AATTAGGCTC | TGGAAAGACG | 3240 |
| 3241 | CTCGTTAGCG | TTGGTAAGAT | TCAGGATAAA | ATTGTAGCTG | GGTGCAAAAT | AGCAACTAAT | 3300 |
| 3301 | CTTGATTTAA | GGCTTCAAAA | CCTCCCGCAA | GTCGGGAGGT | TCGCTAAAAC | GCCTCGCGTT | 3360 |
| 3361 | CTTAGAATAC | CGGATAAGCC | TTCTATATCT | GATTTGCTTG | CTATTGGGCG | CGGTAATGAT | 3420 |
| 3421 | TCCTACGATG | AAAAATAAAA | CGGCTTGCTT | GTTCTCGATG | AGTGC GGTA | TTGGTTTAAT | 3480 |
| 3481 | ACCCGTTCCT | GGAATGATAA | GGAAAGACAG | CCGATTATTG | ATTGGTTTCT | ACATGCTCGT | 3540 |
| 3541 | AAATTAGGAT | GGGATATTAT | TTTCTTGTT | CAGGACTTAT | CTATTGTTGA | TAAACAGGCG | 3600 |
| 3601 | CGTTCTGCAT | TAGCTGAACA | TGTTGTTTAT | TGTCGTCTGTC | TGGACAGAAT | TACTTTACCT | 3660 |
| 3661 | TTTGTCGGTA | CTTTATATTC | TCTTATTACT | GGCTCGAAAA | TGCCTCTGCC | TAAATTACAT | 3720 |
| 3721 | GTTGGCGTTG | TTAAATATGG | CGATTCTCAA | TTAAGCCCTA | CTGTTGAGCG | TTGGCTTTAT | 3780 |
| 3781 | ACTGGTAAGA | ATTTGTATAA | CGCATATGAT | ACTAAACAGG | CTTTTCTAG | TAATTATGAT | 3840 |
| 3841 | TCCGGTGTTT | ATTCTTATTT | AACGCCTTAT | TTATCACACG | GTCGGTATTT | CAAACCATTA | 3900 |
| 3901 | AATTTAGGTC | AGAAGATGAA | GCTTACTAAA | ATATATTTGA | AAAAGTTTTT | ACGCGTTCTT | 3960 |
| 3961 | TGTCITGCGA | TTGGATTTGC | ATCAGCATTT | ACATATAGTT | ATATAACCCA | ACCTAAGCCG | 4020 |
| 4021 | GAGGTTAAAA | AGGTAGTCTC | TCAGACCTAT | GATTTTGATA | AATTCACAT | TGACTCTTCT | 4080 |
| 4081 | CAGCGTCTTA | ATCTAAGCTA | TCGCTATGTT | TTCAAGGATT | CTAAGGGAAA | ATTAATTAAT | 4140 |
| 4141 | AGCGACGATT | TACAGAAGCA | AGGTTATTCA | CTCACATATA | TTGATTTATG | TACTGTTTCC | 4200 |
| 4201 | ATTAATAAAG | GTAATTCAAA | TGAAATTGTT | AAATGTAATT | AATTTTGTTT | TCTTGATGTT | 4260 |
| 4261 | TGTTTCATCA | TCTTCTTTTG | CTCAGGTAAT | TGAAATGAAT | AATTCGCCTC | TGCGCGATTT | 4320 |
| 4321 | TGTAACCTTG | TATTCAAAGC | AATCAGGCGA | ATCCGTTATT | GTTTCTCCCG | ATGTAAGAGG | 4380 |
| 4381 | TACTGTTACT | GTATATTCA | CTGACGTTAA | ACCTGAAAAT | CTACGCAATT | TCITTTATTT | 4440 |
| 4441 | TGTTTTACGT | GCTAATAAAT | TTGATATGGT | TGGTTCAATT | CCTTCCATAA | TTCAGAAGTA | 4500 |
| 4501 | TAATCCAAAC | AATCAGGATT | ATATTGATGA | ATTGCCATCA | TCTGATAATC | AGGAATATGA | 4560 |
| 4561 | TGATAATTCC | GCTCCTTCTG | GTGGTTTCTT | TGTTCCGCAA | AATGATAATG | TTACTCAAAC | 4620 |
| 4621 | TTTTAAATTT | AATAACGTTT | GGGCAAAGGA | TTTAATACGA | GTTGTCGAAT | TGTTTGTAAG | 4680 |
| 4681 | GTCTAATACT | TCTAAATCCT | CAAAATGTATT | ATCTATTGAC | GGCTCTAATC | TATTAGTTGT | 4740 |
| 4741 | TAGTGCACCT | AAAGATATTT | TAGATAACCT | TCCTCAATTC | CTTTCTACTG | TTGATTTGCC | 4800 |
| 4801 | AACTGACCAG | ATATTGATTG | AGGGTTTGAT | ATTTGAGGTT | CAGCAAGGTG | ATGCTTTAGA | 4860 |
| 4861 | TTTTTTCATTT | GCTGCTGGCT | CTCAGCGTGG | CACTGTTGCA | GGCGGTGTTA | ATACTGACCG | 4920 |
| 4921 | CCTCACCTCT | GTTTTATCTT | CTGCTGGTGG | TTGCTTGGGT | ATTTTAAATG | GCGATGTTTT | 4980 |
| 4981 | AGGGCTATCA | GTTTCGCGAT | TAAAGACTAA | TAGCCATTCA | AAAAATTTGT | CTGTGCCACG | 5040 |
| 5041 | TATTCTTACG | CTTTCAGGTC | AGAAGGGTTC | TATCTCTGTT | GGCCAGAATG | TCCCTTTTAT | 5100 |
| 5101 | TACTGGTCGT | GTGACTGGTG | AATCTGCCAA | TGTAATAAAT | CCATTTCAGA | CGATTGAGCG | 5160 |
| 5161 | TCAAAATGTA | GGTATTTCCA | TGAGCGTTTT | TCCTGTTGCA | ATGGCTGGCG | GTAATATTGT | 5220 |
| 5221 | TCTGGATATT | ACCAGCAAGG | CCGATAGTTT | GAGTTCTTCT | ACTCAGGCAA | GTGATGTTAT | 5280 |
| 5281 | TACTAATCAA | AGAAGTATTG | CTACAACGGT | TAATTTGCGT | GATGGACAGA | CTCTTTTACT | 5340 |
| 5341 | CGGTGGGCTC | ACTGATTATA | AAAACACTTC | TCAAGATTCT | GGCGTACCGT | TCCTGTCTAA | 5400 |
| 5401 | AATCCCTTTA | ATCGGCCTCC | TGTTTAGCTC | CCGCTCTGAT | TCCAACGAGG | AAAGCAGCTT | 5460 |
| 5461 | ATACGTGCTC | GTCAAAGCAA | CCATAGTACG | CGCCCTGTAG | CGGCGCATTA | AGCGCGGCGG | 5520 |
| 5521 | GTGTGGTGGT | TACGCGCAGC | GTGACCGCTA | CACTTGCCAG | CGCCCTAGCG | CCCGCTCCIT | 5580 |
| 5581 | TCGCTTTCTT | CCCTTCCTTT | CTCGCCACGT | TCGCGGCTT | TCCCGGTCAA | GCTCTAAATC | 5640 |
| 5641 | GGGGGCTCCC | TTTAGGGTTC | CGATTTAGTG | CTTTACGGCA | CCTCGACCCG | AAAAAACTTG | 5700 |

FIG. 3B

| | 10 | 20 | 30 | 40 | 50 | 60 | |
|------|-------------|------------|------------|-------------|------------|------------|------|
| 5701 | ATTTGGGTGA | TGGTTACGT | AGTGGGCCAT | CGCCCTGATA | GACGGTTTTT | CGCCCTTTGA | 5760 |
| 5761 | CGTTGGAGTC | CACGTTCTTT | AATAGTGGAC | TCTTGTTCCA | AACTGGAACA | ACACTCAACC | 5820 |
| 5821 | CTATCTCGGG | CTATTCTTTT | GATTTATAAG | GGATTTTGCC | GATTTGCGAA | CCACCATCAA | 5880 |
| 5881 | ACAGGATTTT | CGCCTGCTGG | GGCAAACCA | CGTGGACCGC | TTGCTGCAAC | TCTCTCAGGG | 5940 |
| 5941 | CCAGGCGGTG | AAGGGCAATC | AGCTGTTGCC | CGTCTCGCTG | GTGAAAAGAA | AAACCACCCT | 6000 |
| 6001 | GGCGCCCAAT | ACGCAAACCG | CCTCTCCCGG | CGCGTTGGCC | GATTCATTAA | TGCAGCTGGC | 6060 |
| 6061 | ACGACAGGTT | TCCCGACTGG | AAAGCGGGCA | GTGAGCGCAA | CGCAATTAAT | GTGAGTTAGC | 6120 |
| 6121 | TCACTCATTA | GGCACCCAG | GCTTTACACT | TTATGCTTCC | GGCTCGTATG | TTGTGTGGAA | 6180 |
| 6181 | TTGTGAGCGG | ATAACAATTT | CACACGCCAA | GGAGACAGTC | ATAATGAAAT | ACCTATTGCC | 6240 |
| 6241 | TACGGCAGCC | GCTGGATTGT | TATTACTCGC | TGCCCAACCA | GCCATGGCCG | AGCTCGTGAT | 6300 |
| 6301 | GACCCAGACT | CCAGATATCC | AACAGGAATG | AGTGTTAATT | CTAGAACGCG | TCACTTGGCA | 6360 |
| 6361 | CTGGCCGTCG | TTTTACAACG | TCGTGACTGG | GAAAACCCCTG | CGGTTACCCA | AGCTTAATCG | 6420 |
| 6421 | CCTTGCAGAA | TTCCCTTTCG | CCAGCTGGCG | TAATAGCGAA | GAGGCCCGCA | CCGATCGCCC | 6480 |
| 6481 | TTCCCAACAG | TTGCGCAGCC | TGAATGGCGA | ATGGCGCTTT | GCCTGGTTTC | CGGCACCAGA | 6540 |
| 6541 | AGCGGTGCGG | GAAAGCTGGC | TGGAGTGCGA | TCTTCCTGAG | GCCGATACGG | TCGTCTGCC | 6600 |
| 6601 | CTCAAACCTGG | CAGATGCACG | GTTACGATGC | GCCCATCTAC | ACCAACGTAA | CCTATCCCAT | 6660 |
| 6661 | TACGGTCAAT | CCGCCGTTTG | TTCCACCGGA | GAATCCGACG | GGTTGTTACT | CGCTCACATT | 6720 |
| 6721 | TAATGTTGAT | GAAAGCTGGC | TACAGGAAGG | CCAGACGCGA | ATTATTTTTG | ATGGCGTTCC | 6780 |
| 6781 | TATTGGTTAA | AAAATGAGCT | GATTTAACAA | AAATTTAACG | CGAATTTTAA | CAAAATATTA | 6840 |
| 6841 | ACGTTTACAA | TTTAAATATT | TGCTTATACA | ATCTTCCTGT | TTTTGGGGCT | TTTCTGATTA | 6900 |
| 6901 | TCAACCGGGG | TACATATGAT | TGACATGCTA | GTTTTACGAT | TACCGTTTAT | CGATTCTCTT | 6960 |
| 6961 | GTTTGCTCCA | GACTCTCAGG | CAATGACCTG | ATAGCCTTTG | TAGATCTCTC | AAAAATAGCT | 7020 |
| 7021 | ACCCTCTCCG | GCATTAATTT | ATCAGCTAGA | ACGGTTGAAT | ATCATATTGA | TGGTGATTTG | 7080 |
| 7081 | ACTGTCTCCG | GCCTTTCTCA | CCCTTTTGAA | TCTTTACCTA | CACATTACTC | AGGCATTGCA | 7140 |
| 7141 | TTTAAATAT | ATGAGGGTTC | TAAAAATTTT | TATCCTTGCG | TTGAAATAAA | GGCTTCTCCC | 7200 |
| 7201 | GCAAAAAGTAT | TACAGGGTCA | TAATGTTTTT | GGTACAACCG | ATTTAGCTTT | ATGCTCTGAG | 7260 |
| 7261 | GCTTTATTGC | TTAATTTTGC | TAATTCCTTG | CCTTGCCCTGT | ATGATTTATT | GGATGTT | 7317 |

FIG. 3C

| | 1 | 10 | 20 | 30 | 40 | 50 | 60 |
|------|-------------|-------------|------------|------------|-------------|-------------|------|
| 1 | AATGCTACTA | CTATTAGTAG | AATTGATGCC | ACCTTTTCAG | CTCGCGCCCC | AAATGAAAAT | 60 |
| 61 | ATAGCTAAAC | AGGTTATTGA | CCATTTGCGA | AATGTATCTA | ATGGTCAAAC | TAAATCTACT | 120 |
| 121 | CGTTCGCAGA | ATTGGGAATC | AACTGTTACA | TGGAATGAAA | CTTCCAGACA | CCGTACTTTA | 180 |
| 181 | GTTGCATATT | TAAAACATGT | TGAGCTACAG | CACCAGATTG | AGCAATTAAG | CTCTAAGCCA | 240 |
| 241 | TCCGCAAAAA | TGACCTCTTA | TCAAAAGGAG | CAATTAAGG | TACTCTCTAA | TCCTGACCTG | 300 |
| 301 | TTGGAGTTTG | CTTCCGGTCT | GGTTTCGCTT | GAAGCTCGAA | TAAAAACGCG | ATATTTGAAG | 360 |
| 361 | TCTTTCGGGC | TTCTCTTAA | TCTTTTGTAT | GCAATCCGCT | TTGCTTCTGA | CTATAATAGT | 420 |
| 421 | CAGGGTAAAG | ACCTGATTTT | TGATTTATGG | TCATTCTCGT | TTTCTGAACT | GTTTAAAGCA | 480 |
| 481 | TTTGAGGGGG | ATTCAATGAA | TATTTATGAC | GATTCCGCAG | TATTGGACGC | TATCCAGTCT | 540 |
| 541 | AAACATTTTA | CTATTACCCC | CTCTGGCAAA | ACTTCTTTTG | CAAAAGCCTC | TCGCTATTTT | 600 |
| 601 | GGTTTTTATC | GTCGTCTGGT | AAACGAGGGT | TATGATAGTG | TTGCTCTTAC | TATGCCTCGT | 660 |
| 661 | AATTCCTTTT | GGCGTTATGT | ATCTGCATTA | GTTGAATGTG | GTATTCCTAA | ATCTCAACTG | 720 |
| 721 | ATGAATCTTT | CTACCTGTAA | TAATGTTGTT | CCGTTAGTTC | GTTTTATTAA | CGTAGATTTT | 780 |
| 781 | TGTTCCCAAC | GTCCTGACTG | GTATAATGAG | CCAGTTCTTA | AAATCGCATA | AGGTAATCCA | 840 |
| 841 | CAATGATTAA | AGTTGAAATT | AAACCATCTC | AAGCCCAATT | TACTACTCGT | TCTGGTGTTC | 900 |
| 901 | CTCGTCAGGG | CAAGCCTTAT | TCACTGAATG | AGCAGCTTTG | TTACGTTGAT | TTGGGTAATG | 960 |
| 961 | AATATCCGGT | TCTTGTCAAG | ATTACTCTTG | ATGAAGGTCA | GCCAGCCTAT | GCGCCTGGTC | 1020 |
| 1021 | TGTACACCGT | TCATCTGTCC | TCTTTCAAGA | TTGGTCAGTT | CGGTTCCCTT | ATGATTGACC | 1080 |
| 1081 | GTCTGCGCCT | CGTTCCGGCT | AAGTAACATG | GAGCAGGTCG | CGGATTTCTGA | CACAATTTAT | 1140 |
| 1141 | CAGGCGATGA | TACAAATCTC | CGTTGTACTT | TGTTTTCGCG | TTGGTATAAT | CGCTGGGGGT | 1200 |
| 1201 | CAAAGATGAG | TGTTTTAGTG | TATTCCTTCG | CCTCTTTCGT | TTTAGGTTGG | TGCCTTCGTA | 1260 |
| 1261 | GTGGCATTAC | GTATTTTACC | CGTTTAATGG | AAACTTCCTC | ATGAAAAAGT | CTTTAGTCCCT | 1320 |
| 1321 | CAAAGCCTCT | GTAGCCGTG | CTACCTCTCG | TCCGATGCTG | TCTTTCGCTG | CTGAGGGTGA | 1380 |
| 1381 | CGATCCCGCA | AAAGCGGCCT | TAACTCCCT | GCAAGCCTCA | GCGACCGAAT | ATATCGGTTA | 1440 |
| 1441 | TGCGTGGGCG | ATGGTTGTTG | TCATTGTCCG | CGCAACTATC | GGTATCAAGC | TGTTTAAGAA | 1500 |
| 1501 | ATTACACCTG | AAAGCAAGCT | GATAAACCGA | TACAATTAAG | GGCTCCTTTT | GGAGCCTTTT | 1560 |
| 1561 | TTTTTGGAGA | TTTTCAACGT | GAAAAAATTA | TTATTCGCAA | TTCTTTTAGT | TGTTCTTTTC | 1620 |
| 1621 | TATTCTCACT | CCGCTGAAAC | TGTTGAAAGT | TGTTTAGCAA | AACCCCATAC | AGAAAAATCA | 1680 |
| 1681 | TTTACTAACG | TCTGGAAGAA | CGACAAAAC | TTAGATCGTT | ACGCTAACTA | TGAGGGTTGT | 1740 |
| 1741 | CTGTGGAATG | CTACAGGCGT | TGTAGTTTGT | ACTGGTGACG | AAACTCAGTG | TTACGGTACA | 1800 |
| 1801 | TGGGTTTCTA | TTGGGCTTGC | TATCCCTGAA | AATGAGGGTG | GTGGCTCTGA | GGGTGGCGGT | 1860 |
| 1861 | TCTGAGGGTG | GCGGTTCTGA | GGGTGGCGGT | ACTAAACCTC | CTGAGTACGG | TGATACACCT | 1920 |
| 1921 | ATTCGGGGCT | ATACCTATAT | CAACCTCTC | GACGGCACTT | ATCCGCCTGG | TACTGAGCAA | 1980 |
| 1981 | AACCCCGCTA | ATCCTAATCC | TTCTCTTGAG | GAGTCTCAGC | CTCTTAATAC | TTTCATGTTT | 2040 |
| 2041 | CAGAATAATA | GGTTCCGAAA | TAGGCAGGGG | GCAATTAACG | TTTATACGGG | CACTGTTACT | 2100 |
| 2101 | CAAGGCACTG | ACCCCGTTAA | AACTTATTAC | CAGTACACTC | CTGTATCATC | AAAAGCCATG | 2160 |
| 2161 | TATGACGCTT | ACTGGAACGG | TAAATTGAGA | GACTGCGCTT | TCCATTCTGG | CTTTAATGAA | 2220 |
| 2221 | GATCCATTCTG | TTTGTGAATA | TCAAGGCCAA | TCGTCTGACC | TGCCTCAACC | TCCTGTCAAT | 2280 |
| 2281 | GCTGGCGGCG | GCTCTGGTGG | TGGTTCTGGT | GGCGGCTCTG | AGGGTGGTGG | CTCTGAGGGT | 2340 |
| 2341 | GGCGGTTCTG | AGGGTGGCGG | CTCTGAGGGA | GGCGGTTCCG | GTGGTGGCTC | TGGTTCCGGT | 2400 |
| 2401 | GATTTTGATT | ATGAAAAGAT | GGCAACGCT | AATAAGGGGG | CTATGACCGA | AAATGCCGAT | 2460 |
| 2461 | GAAAACGCGC | TACAGTCTGA | CGCTAAAGGC | AAACTTGATT | CTGTCGCTAC | TGATTACGGT | 2520 |
| 2521 | GCTGCTATCG | ATGGTTTCAT | TGGTGACGTT | TCCGGCCCTG | CTAATGGTAA | TGGTGTACT | 2580 |
| 2581 | GGTGATTTTG | CTGGCTCTAA | TTCCCAAATG | GCTCAAGTCG | GTGACGGTGA | TAATTCACCT | 2640 |
| 2641 | TTAATGAATA | ATTTCCGCTCA | ATATTTACCT | TCCCTCCCTC | AATCGGTTGA | ATGTCGCCCT | 2700 |
| 2701 | TTTGTCTTTA | GCGCTGGTAA | ACCATATGAA | TTTTCTATTG | ATTGTGACAA | AATAAACTTA | 2760 |
| 2761 | TTCCGTGGTG | TCTTTGCGTT | TCTTTTATAT | GTTGCCACCT | TTATGTATGT | ATTTTCTACG | 2820 |
| 2821 | TTTGCTAACA | TACTGCGTAA | TAAGGAGTCT | TAATCATGCC | AGTTCTTTTG | GGTATTCGGT | 2880 |
| 2881 | TATTATTGCG | TTTCCTCGGT | TTCTTCTG | TAACCTTTGT | CGGCTATCTG | CTTACTTTTC | 2940 |
| 2941 | TTAAAAAGGG | CTTCGGTAAG | ATAGCTATTG | CCTGTTTCTT | GCTCTTATTA | TTGGGCTTAA | 3000 |

FIG. 4A

| | 1 | 10 | 20 | 30 | 40 | 50 | 60 | |
|------|------------|-------------|------------|-------------|------------|------------|------|--|
| 3001 | CTCAATTCTT | GTGGGTTATC | TCTCTGATAT | TAGCGCTCAA | TTACCCTCTG | ACTTTGTTCA | 3060 | |
| 3061 | GGGTGTTTCA | TTAATTCTCC | CGTCTAATGC | GCTTCCCTGT | TTTTATGTTA | TTCTCTCTGT | 3120 | |
| 3121 | AAAGGCTGCT | ATTTTCAAT | TTGACGTTAA | ACAAAAAATC | TTTTCTTATT | TGGATTGGGA | 3180 | |
| 3181 | TAAATAATAT | GGCTGTTTAT | TTTGTAAGTG | GCAAAATTAGG | CTCTGGAAAG | ACGCTCGTTA | 3240 | |
| 3241 | GCGTTGGTAA | GATTCAGGAT | AAAATTGTAG | CTGGGTGCAA | AATAGCAACT | AATCTTGATT | 3300 | |
| 3301 | TAAGGCTTCA | AAACCTCCCG | CAAGTCGGGA | GGTTCGCTAA | AACGCCCTCG | GTTCTTAGAA | 3360 | |
| 3361 | TACCGGATAA | GCCTTCTATA | TCTGATTTGC | TTGCTATTGG | GCGCGTAAT | GATTCCTACG | 3420 | |
| 3421 | ATGAAAATAA | AAACGGCTTG | CTTGTTCTCG | ATGAGTGCGG | TACTTGGTTT | AATACCCGTT | 3480 | |
| 3481 | CTTGGAATGA | TAAGGAAAGA | CAGCCGATTA | TTGATTGGTT | TCTACATGCT | CGTAAATTAG | 3540 | |
| 3541 | GATGGGATAT | TATTTTCTT | GTTCAGGACT | TATCTATTGT | TGATAAACAG | GCGCGTTCTG | 3600 | |
| 3601 | CATTAGCTGA | ACATGTTGTT | TATTTGTCGT | GCTCTGGACAG | AATTACTTTA | CTTTTGTCTG | 3660 | |
| 3661 | GTACTTTATA | TTCTCTTATT | ACTGGCTCTG | AAATGCCTCT | GCCTAAATTA | CATGTTGGCG | 3720 | |
| 3721 | TTGTTAAATA | TGGCGATTCT | CAATTAAGCC | CTACTGTTGA | GCGTTGGCTT | TATACGTTGA | 3780 | |
| 3781 | AGAATTTGTA | TAACGCATAT | GATACTAAAC | AGGCTTTTTC | TAGTAATTAT | GATTCCGGTG | 3840 | |
| 3841 | TTTATTCTTA | TTTAACGCCT | TATTTATCAC | ACGGTCGGTA | TTTCAAACCA | TTAAATTTAG | 3900 | |
| 3901 | GTCAGAAAGT | GAAGCTTACT | AAAATATATT | TGAAAAAGTT | TTACACGCGT | CTTTGTCTTG | 3960 | |
| 3961 | CGATTGGATT | TGCATCAGCA | TTTACATATA | GTTATATAAC | CCAACCTAAG | CCGGAGGTTA | 4020 | |
| 4021 | AAAAGGTAGT | CTCTCAGACC | TATGATTTTG | ATAAATTCAC | TATTGACTCT | TCTCAGCGTC | 4080 | |
| 4081 | TTAATCTAAG | CTATCGCTAT | GTTTTCAAGG | ATTCTAAGGG | AAAAATTAAT | AATAGCGACG | 4140 | |
| 4141 | ATTTACAGAA | GCAAGGTTAT | TCACTCACAT | ATATTGATTT | ATGTAAGTTT | TCCATTAATA | 4200 | |
| 4201 | AAGGTAATTC | AAATGAAATT | GTTAAATGTA | ATTAATTTTG | TTTTCTTGAT | GTTTGTTTCA | 4260 | |
| 4261 | TCATCTTCTT | TTGCTCAGGT | AATTGAAATG | AATAATTCGC | CTCTGCGCGA | TTTTGTAAGT | 4320 | |
| 4321 | TGGTATTCAA | AGCAATCAGG | CGAATCCGTT | ATTGTTTCTC | CCGATGTAAA | AGGTACTGTT | 4380 | |
| 4381 | ACTGTATATT | CATCTGACGT | TAAACCTGAA | AATCTACGCA | ATTTCTTTAT | TTCTGTTTTA | 4440 | |
| 4441 | CGTGCTAATA | ATTTTGATAT | GGTTGGTTCA | ATTCCTTCCA | TAATTCAGAA | GTATAATCCA | 4500 | |
| 4501 | AACAATCAGG | ATTATATTGA | TGAATTGCCA | TCATCTGATA | ATCAGGAATA | TGATGATAAT | 4560 | |
| 4561 | TCCGCTCCTT | CTGGTGGTTT | CTTTGTTCCG | CAAAATGATA | ATGTTACTCA | AACTTTTAAA | 4620 | |
| 4621 | ATTAATAACG | TTCCGGGCAAA | GGATTAAATA | CGAGTTGTCG | AATTGTTTGT | AAAGTCTAAT | 4680 | |
| 4681 | ACTTCTAAAT | CCTCAAATGT | ATTATCTATT | GACGGCTCTA | ATCTATTAGT | TGTTAGTGCA | 4740 | |
| 4741 | CCTAAAGATA | TTTTAGATAA | CCTTCCTCAA | TTCTTTTCTA | CTGTTGATTT | GCCAAGTGAC | 4800 | |
| 4801 | CAGATATTGA | TTGAGGGTTT | GATATTGAG | GTTCAAGCAAG | GTGATGCTTT | AGATTTTTCA | 4860 | |
| 4861 | TTTGCTGCTG | GCTCTCAGCG | TGGCACTGTT | GCAGGCGGGT | TTAATACTGA | CCGCCTCACC | 4920 | |
| 4921 | TCTGTTTTAT | CTTCTGCTGG | TGGTTCGTTT | GGTATTTTTA | ATGGCGATGT | TTTAGGGCTA | 4980 | |
| 4981 | TCAGTTCGCG | CATTAAAGAC | TAATAGCCAT | TCAAAAATAT | TGTCTGTGCC | ACGTATTCTT | 5040 | |
| 5041 | ACGCTTTTCA | GTCAGAAGGG | TTCTATCTCT | GTTGGCCAGA | ATGTCCTTTT | TATTACTGGT | 5100 | |
| 5101 | CGTGTGACTG | GTGAATCTGC | CAATGTAAAT | AATCCATTTT | AGACGATTGA | GCGTCAAAAT | 5160 | |
| 5161 | GTAGGTATTT | CCATGAGCGT | TTTTCTGTTT | GCAATGGCTG | GCGGTAATAT | TGTTCTGGAT | 5220 | |
| 5221 | ATTACCAGCA | AGGCCGATAG | TTTGAGTTCT | TCTACTCAGG | CAAGTGATGT | TATTACTAAT | 5280 | |
| 5281 | CAAAGAAGTA | TTGCTACAAC | GGTTAATTTG | CGTGATGGAC | AGACTCTTTT | ACTCGGTGGC | 5340 | |
| 5341 | CTCACTGATT | ATAAAAAACAC | TTCTCAAGAT | TCTGGCGTAC | CGTTCTGTGC | TAAAAATCCT | 5400 | |
| 5401 | TTAATCGGCC | TCCTGTTTAG | CTCCGCTCT | GATTCCAACG | AGGAAAGCAC | GTTATACGTG | 5460 | |
| 5461 | CTCGTCAAAG | CAACCATAGT | ACGCGCCCTG | TAGCGGCGCA | TTAAGCGCGG | CGGGTGTGGT | 5520 | |
| 5521 | GGTTACGCGC | AGCGTGACCG | CTACACTTGC | CAGCGCCCTA | GCGCCCGCTC | CTTTCGCTTT | 5580 | |
| 5581 | CTTCCCTTCC | TTTCTCGCCA | CGTTCGCGGG | CTTTCCCGGT | CAAGCTCTAA | ATCGGGGGCT | 5640 | |
| 5641 | CCCTTTAGGG | TTCCGATTTA | GTGCTTTACG | GCACCTCGAC | CCCAAAAAAC | TTGATTTGGG | 5700 | |
| 5701 | TGATGGTTCA | CGTAGTGGGC | CATCGCCCTG | ATAGACGGTT | TTTCGCCCTT | TGACGTTGGA | 5760 | |
| 5761 | GTCCACGTTT | TTTAATAGTG | GACTCTTGTT | GCAAACTGGA | ACAACACTCA | ACCCTATCTC | 5820 | |
| 5821 | GGGCTATTCT | TTTGATTTAT | AAGGGATTTT | CCCGATTTCG | GAACCAACAT | CAAACAGGAT | 5880 | |
| 5881 | TTTCGCCTGC | TGGGGCAAAC | CAGCGTGGAC | CGCTTGCTGC | AACCTCTCTA | GGGCCAGGCG | 5940 | |
| 5941 | GTGAAGGGCA | ATCAGCTGTT | GCCCGTCTCG | CTGGTGAATA | GAAAAACAC | CCTGGCGCCC | 6000 | |

FIG. 4B

| | 1 | 10 | 20 | 30 | 40 | 50 | 60 | |
|------|-------------|-------------|------------|-------------|------------|------------|------|--|
| 6001 | AATACGCAAA | CCGCCTCTCC | CCGCGCGTTG | GCCGATTCAT | TAATGCAGCT | GGCAGGACAG | 6060 | |
| 6061 | GTTTCCCGAC | TGGAAAGCGG | GCAGTGAGCG | CAACGCAATT | AATGTGAGTT | AGCTCACTCA | 6120 | |
| 6121 | TTAGGCACCC | CAGGCTTTAC | ACTTTATGCT | TCCGGCTCGT | ATGTTGTGTG | GAATTGTGAG | 6180 | |
| 6181 | CGGATAACAA | TTTCACACGC | CAAGGAGACA | GTCATAATGA | AATACCTATT | GCCTACGGCA | 6240 | |
| 6241 | GCCGCTGGAT | TGTTATTACT | CGCTGCCCAA | CCAGCCATGG | CCGAGCTCTT | CCCGCCATCT | 6300 | |
| 6301 | GATGAGCAGT | TGAAATCTGG | AACTGCCTCT | GTTGTGTGCC | TGCTGAATAA | CTTCTATCCC | 6360 | |
| 6361 | AGAGAGGCCA | AAGTACAGTG | GAAGGTGGAT | AACGCCCTCC | AATCGGGTAA | CTCCAGGAG | 6420 | |
| 6421 | AGTGTACACAG | AGCAGGACAG | CAAGGACAGC | ACCTACAGCC | TCAGCAGCAC | CCTGACGCTG | 6480 | |
| 6481 | AGCAAAGCAG | ACTACGAGAA | ACACAAAGTC | TACGCCTGCG | AAGTCACCCA | TCAGGGCCTG | 6540 | |
| 6541 | AGCTCGCCCG | TCACAAAGAG | CTTCAACAGG | GGAGAGTGTT | CTAGAACGCG | TCACTTGCA | 6600 | |
| 6601 | CTGGCCGTCG | TTTTACAACG | TCGTGACTGG | GAAGAACCTG | GCGTTACCCA | AGCTTAATCG | 6660 | |
| 6661 | CCTTGCAGAA | TTCCCTTTTCG | CCAGCTGGCG | TAATAGCGAA | GAGGCCCGCA | CCGATCGCCC | 6720 | |
| 6721 | TTCCCAACAG | TTGCGCAGCC | TGAATGGCGA | ATGGCGCTTT | GCCTGGTTTC | CGGCACCAGA | 6780 | |
| 6781 | AGCGGTGCCG | GAAAGCTGGC | TGGAGTGCGA | TCTTCCTGAG | GCCGATACGG | TCGTGCTCCC | 6840 | |
| 6841 | CTCAAACCTGG | CAGATGCACG | GTTACGATGC | GCCCCATCTAC | ACCAACGTAA | CCTATCCCCT | 6900 | |
| 6901 | TACGGTCAAT | CCGCCGTTTG | TTCCACGGA | GAATCCGACG | GGTTGTTACT | CGCTCACATT | 6960 | |
| 6961 | TAATGTTGAT | GAAAGCTGGC | TACAGGAAGG | CCAGACGCGA | ATTATTTTTG | ATGGCGTTCC | 7020 | |
| 7021 | TATTGGTTAA | AAAATGAGCT | GATTTAACAA | AAATTTAACG | CGAATTTTAA | CAAAATATTA | 7080 | |
| 7081 | ACGTTTACAA | TTTAAATATT | TGCTTATACA | ATCTTCCTGT | TTTTGGGGCT | TTTCTGATTA | 7140 | |
| 7141 | TCAACCGGGG | TACATATGAT | TGACATGCTA | GTTTTACGAT | TACCGTTTAT | CGATTCTCTT | 7200 | |
| 7201 | GTTTGCTCCA | GACTCTCAGG | CAATGACCTG | ATAGCCTTTG | TAGATCTCTC | AAAAATAGCT | 7260 | |
| 7261 | ACCTCTCCG | GCATTAATTT | ATCAGCTAGA | ACGGTTGAAT | ATCATATTGA | TGGTGATTTG | 7320 | |
| 7321 | ACTGTCTCCG | GCCTTTCTCA | CCCTTTTGAA | TCTTTACCTA | CACATTACTC | AGGCATTGCA | 7380 | |
| 7381 | TTTAAAATAT | ATGAGGGTTC | TAAAAATTTT | TATCCTTGCG | TTGAAATAAA | GGCTTCTCCC | 7440 | |
| 7441 | GCAAAAAGTAT | TACAGGGTCA | TAATGTTTTT | GGTACAACCG | ATTTAGCTTT | ATGCTCTGAG | 7500 | |
| 7501 | GCTTTATTGC | TTAATTTTGC | TAATTCCTTG | CCTTGCCTGT | ATGATTTATT | GGATGTT | 7557 | |

FIG. 4C

| | 1 | 10 | 20 | 30 | 40 | 50 | 60 |
|------|-------------|------------|------------|-------------|-------------|------------|------|
| 1 | AATGCTACTA | CTATTAGTAG | AATTGATGCC | ACCTTTTCAG | CTCGCGCCCC | AAATGAAAAT | 60 |
| 61 | ATAGCTAAAC | AGGTTATTGA | CCATTTGCGA | AATGTATCTA | ATGGTCAAAC | TAAATCTACT | 120 |
| 121 | CGTTCGCAGA | ATTGGGAATC | AACTGTTACA | TGGAATGAAA | CTTCCAGACA | CCGTACTTTA | 180 |
| 181 | GTTGCATATT | TAAAACATGT | TGAGCTACAG | CACCAGATTC | AGCAATTAAG | CTCTAAGCCA | 240 |
| 241 | TCTGCAAAAA | TGACCTCTTA | TCAAAAGGAG | CAATTAAGG | TACTCTCTAA | TCCTGACCTG | 300 |
| 301 | TTGGAGTTTG | CTTCCGGTCT | GGTTCGCTTT | GAAGCTCGAA | TTAAAACGCG | ATATTTGAAG | 360 |
| 361 | TCTTTTCGGGC | TTCTCTTTAA | TCTTTTGTAT | GCAATCCGCT | TTGCTTCTGA | CTATAATAGT | 420 |
| 421 | CAGGGTAAAG | ACCTGATTTT | TGATTTATGG | TCATTCTCGT | TTTCTGAAC | GTTTAAAGCA | 480 |
| 481 | TTTGAGGGGG | ATTCAATGAA | TATTTATGAC | GATTCCGCAG | TATTGGACGC | TATCCAGTCT | 540 |
| 541 | AAACATTTTA | CTATTACCCC | CTCTGGCAAA | ACTTCTTTTG | CAAAAGCCTC | TCGCTATTTT | 600 |
| 601 | GGTTTTTATC | GTCGTCTGGT | AAACGAGGGT | TATGATAGTG | TTGCTCTTAC | TATGCCTCGT | 660 |
| 661 | AATTCCTTTT | GGCGTTATGT | ATCTGCATTA | GTTGAATGTG | GTATTCCTAA | ATCTCAACTG | 720 |
| 721 | ATGAATCTTT | CTACCTGTAA | TAAATGTTGT | CCGTTAGTTC | GTTTTATTAA | CGTAGATTTT | 780 |
| 781 | TCTTCCCAAC | GTCTTGACTG | GTATAATGAG | CCAGTTCCTA | AAATCGCATA | AGGTAATTCA | 840 |
| 841 | CAATGATTAA | AGTTGAAATT | AAACCATCTC | AAGCCCAATT | TACTACTCGT | TCTGGTGTTC | 900 |
| 901 | CTCGTCAGGG | CAAGCCTTAT | TCACTGAATG | AGCAGCTTTG | TTACGTTGAT | TTGGGTAATG | 960 |
| 961 | AATATCCGGT | TCTTGTCAAG | ATTACTCTTG | ATGAAGGTCA | GCCAGCCTAT | GCGCCTGGTC | 1020 |
| 1021 | GTGGCACCCT | TCATCTGTCC | TCTTTCAAAG | TTGGTCAGTT | CGGTTCCCTT | ATGATTGACC | 1080 |
| 1081 | GTCTGCGCCT | CGTTCGGGCT | AAGTAACATG | GAGCAGGTCTG | CGGATTTCTGA | CACAATTTAT | 1140 |
| 1141 | CAGGCGATGA | TACAAATCTC | CGTTGTACTT | TGTTTCGCGC | TTGGTATAAT | CGCTGGGGGT | 1200 |
| 1201 | CAAAGATGAG | TGTTTTAGTG | TATTTCTTCG | CCTCTTTCTG | TTTAGGTTGG | TGCCTTCGTA | 1260 |
| 1261 | GTGGCATTAC | GTATTTTACC | CGTTTAAATG | AAACTTCCTC | ATGAAAAAGT | CTTTAGTCTT | 1320 |
| 1321 | CAAAGCCTCT | GTAGCCGTTG | CTACCCTCGT | TCCGATGCTG | TCTTTTCGCTG | CTGAGGGTGA | 1380 |
| 1381 | CGATCCCGCA | AAAGCGGCCT | TAACTCCCTT | GCAAGCCTCA | GCGACCGAAT | ATATCGGTTA | 1440 |
| 1441 | TGCGTGGGCG | ATGGTTGTTG | TCATTGTCTG | CGCAACTATC | SGTATCAAGC | TGTTTAAAGA | 1500 |
| 1501 | ATTGCACTCG | AAAGCAAGCT | GATAAACCGA | TACAATTAAA | GGCTCCTTTT | GGAGCCTTTT | 1560 |
| 1561 | TTTTTGGAGA | TTTTCAACGT | GAAAAAATTA | TTATTCGCAA | TTCTTTTAGT | TGTTCCCTTC | 1620 |
| 1621 | TATTCTCACT | CCGCTGAAAC | TGTTGAAAGT | TGTTTAGCAA | AACCCCATAC | AGAAAAATTC | 1680 |
| 1681 | TTTACTAACG | TCTGGAAAGA | CGACAAAATC | TTAGATCGTT | ACGCTAACTA | TGAGGTGTGT | 1740 |
| 1741 | CTGTGGAATG | CTACAGGCGT | TGTAGTTTGT | ACTGGTGACG | AAACTCAGTG | TTACGGTACA | 1800 |
| 1801 | TGGGTTCCCTA | TTGGGCTTGC | TATCCCTGAA | AATGAGGGTG | GTGGCTCTGA | GGGTGGCGGT | 1860 |
| 1861 | TCTGAGGGTG | GCGGTTCTGA | GGGTGGCGGT | ACTAAACCTC | CTGAGTACGG | TGATACACCT | 1920 |
| 1921 | ATTCCGGGCT | ATACTTATAT | CAACCCTCTC | GACGGCACTT | ATCCGCCTGG | TACTGAGCAA | 1980 |
| 1981 | AACCCCGCTA | ATCCTAATCC | TTCTCTTGAG | GAGTCTCAGC | CTCTTAATAC | TTTCATGTTT | 2040 |
| 2041 | CAGAATAATA | GGTTCCGAAA | TAGGCAAGGG | GCATTAACCTG | TTTATACGGG | CACTGTTACT | 2100 |
| 2101 | CAAGGCACTG | ACCCCGTTAA | AACTTATTAC | CAGTACACTC | CTGTATCATC | AAAAGCCATG | 2160 |
| 2161 | TATGACGCTT | ACTGGAACGG | TAAATTGAGA | GACTGCGCTT | TCCATTCTGG | CTTTAATGAA | 2220 |
| 2221 | GATCCATTTCG | TTTGTGAATA | TCAAGGCCAA | TCGTCTGACC | TGCCTCAACC | TCCTGTCAAT | 2280 |
| 2281 | GCTGGCGGCG | GCTCTGGTGG | TGGTCTGGT | GGCGGCTCTG | AGGGTGGTGG | CTCTGAGGGT | 2340 |
| 2341 | GGCGGTTCTG | AGGGTGGCGG | CTCTGAGGGA | GGCGGTTCCG | GTGGTGGCTC | TGGTTCGGGT | 2400 |
| 2401 | GATTTTGTATT | ATGAAAAGAT | GGCAACCGCT | AATAAGGGGG | CTATGACCGA | AAATGCCGAT | 2460 |
| 2461 | GAAAACGCGC | TACAGTCTGA | CGCTAAAGGC | AAACTTGATT | CTGTGCGTAC | TGATTACGGT | 2520 |
| 2521 | GCTGCTATCG | ATGGTTTCAT | TGGTGACGTT | TCCGGCCCTG | CTAATGGTAA | TGGTGCTACT | 2580 |
| 2581 | GGTGATTTTG | CTGGCTCTAA | TTCCCAAATG | GCTCAAGTCG | GTGACGGTGA | TAATTACCTT | 2640 |
| 2641 | TTAATGAATA | ATTTCCGTCA | ATATTTACCT | TCCCTCCCTC | AATCGGTTGA | ATGTGCGCCT | 2700 |
| 2701 | TTTGTCTTTA | GCGCTGGTAA | ACCATATGAA | TTTTCTATTG | ATTGTGACAA | AATAAACTTA | 2760 |
| 2761 | TTCCGTGGTG | TCTTTGCGTT | TCTTTTATAT | GTTGCCACCT | TTATGTATGT | ATTTTCTACG | 2820 |
| 2821 | TTTGCTAACA | TACTGCGTAA | TAAAGAGTCT | TAATCATGCC | AGTTCTTTTG | GGTATTCGGT | 2880 |
| 2881 | TATTATTGCG | TTTCCTCGGT | TTCTTCTG | TAACCTTTGT | CGGCTATCTG | CTTACTTTTC | 2940 |
| 2941 | TAAAAAAGGG | CTTCGGTAAG | ATAGCTATTG | CTATTTTCATT | GTTTCTTGCT | GTTATTATTG | 3000 |

FIG. 5A

| | 10 | 20 | 30 | 40 | 50 | 60 | |
|------|-------------|-------------|-------------|-------------|-------------|-------------|------|
| 3001 | GGCTTAACTC | AATTCTTG TG | GGTTATCTCT | CTGATATTAG | CGCTCAATTA | CCCTCTGACT | 3060 |
| 3061 | TTGTTTCAGGG | TGTTTCAGTTA | ATTCTCCCGT | CTAATGCGCT | TCCCTGTTTT | TATGTTATTC | 3120 |
| 3121 | TCTCTGTAAA | GGCTGCTATT | TTTCAATTTTG | ACGTTAAACA | AAAAATCGTT | TCTTATTTGG | 3180 |
| 3181 | ATTGGGATAA | ATAATATGGC | TGTTTATTTT | GTAACCTGGCA | AATTAGGCTC | TGGAAAGACG | 3240 |
| 3241 | CTCGTTAGCG | TTGGTAAGAT | TCAGGATAAA | ATTGTAGCTG | GGTGCAAAAT | AGCAACTAAT | 3300 |
| 3301 | CTTGATTTAA | GGCTTCAAAA | CCTCCCGCAA | GTCGGGAGGT | TCGCTAAAAC | GCCTCGCGTT | 3360 |
| 3361 | CTTAGAATAC | CGGATAAGCC | TTCTATATCT | GATTTGCTTG | CTATTGGGCG | CGGTAATGAT | 3420 |
| 3421 | TCCTACGATG | AAAATAAAAA | CGGCTTGCTT | GTTCTCGATG | AGTGCGGTAC | TTGGTTTAAAT | 3480 |
| 3481 | ACCCGTTCTT | GGAAATGATAA | GGAAAGACAG | CCGATTATTG | ATTGGTTTCT | ACATGCTCGT | 3540 |
| 3541 | AAATTAGGAT | GGGATATTAT | TTTTCTTGTT | CAGGACTTAT | CTATTGTTGA | TAAACAGGCG | 3600 |
| 3601 | CGTTCTGCAT | TAGCTGAACA | TGTTGTTTAT | TGTCGTCGTC | TGGACAGAAT | TACTTTACCT | 3660 |
| 3661 | TTTGTGCGTA | CTTTATATTC | TCTTATTACT | GGCTCGAAAA | TGCCTCTGCC | TAAATTACAT | 3720 |
| 3721 | GTTGGCGTTG | TTAAATATGG | CGATTCTCAA | TTAAGCCCTA | CTGTTGAGCG | TTGGCTTTAT | 3780 |
| 3781 | ACTGGTAAGA | ATTTGTATAA | CGCATATGAT | ACTAAACAGG | CTTTTCTAG | TAATTATGAT | 3840 |
| 3841 | TCCGGTGTTT | ATTCTTATTT | AACGCCTTAT | TTATCACACG | GTCGGTATTT | CAAAACCATTA | 3900 |
| 3901 | AATTTAGGTC | AGAAGATGAA | CGTTACTAAA | ATATATTGTA | AAAAGTTTTC | ACGCGTTCTT | 3960 |
| 3961 | TGTCITGCGA | TTGGATTTGC | ATCAGCATTT | ACATATAGTT | ATATAACCCA | ACCTAAGCCG | 4020 |
| 4021 | GAGGTTAAAA | AGGTAGTCTC | TCAGACCTAT | GATTTTGATA | AATTCACAT | TGACTCTTCT | 4080 |
| 4081 | CAGCGTCTTA | ATCTAAGCTA | TCGCTATGTT | TTCAAGGATT | CTAAGGGAAA | ATTAATTAAT | 4140 |
| 4141 | AGCGACGATT | TACAGAAGCA | AGGTTATTCA | CTCACATATA | TTGATTTATG | TACTGTTTCC | 4200 |
| 4201 | ATTAATAAAG | GTAATTCAAA | TGAAATTGTT | AAATGTAATT | AAATTTGTTT | TCTTGATGTT | 4260 |
| 4261 | TGTTTCATCA | TCTTCTTTTG | CTCAGGTAAT | TGAAATGAAT | AATTCGCTTC | TGCGCGATT | 4320 |
| 4321 | TGTAACCTGG | TATTCAAAGC | AATCAGGCCA | ATCCGTTATT | GTTTCTCCCG | ATGTAAGAGG | 4380 |
| 4381 | TACTGTTACT | GTATATTCA | CTGACGTTAA | ACCTGAAAAT | CTACGCAATT | TCTTTATTTT | 4440 |
| 4441 | TGTTTACGTT | GCTAATAATT | TTGATATGGT | TGGTTCAATT | CCTTCCATAA | TTTCAAGATA | 4500 |
| 4501 | TAATCCAAAC | AATCAGGATT | ATATTGATGA | ATTGCCATCA | TCTGATAATC | AGGAATATGA | 4560 |
| 4561 | TGATAATTTCC | GCTCCTTCTG | GTGGTTTCTT | TGTTCCGCAA | AATGATAATG | TTACTCAAAC | 4620 |
| 4621 | TTTTAAATTT | AATAACGTTT | GGGCAAAAGGA | TTTAATACGA | GTTGTGCAAT | TGTTTGTAAG | 4680 |
| 4681 | GTCTAATACT | TCTAAATCCT | CAAATGTATT | ATCTATTGAC | GGCTCTAATC | TATTAGTTGT | 4740 |
| 4741 | TAGTGCACCT | AAAGATATTT | TAGATAACCT | TCCTCAATTC | CTTTCTACTG | TTGATTTGCC | 4800 |
| 4801 | AACTGACCAG | ATATTGATTG | AGGGTTTGAT | ATTGAGGTT | CAGCAAGGTG | ATGCTTTAGA | 4860 |
| 4861 | TTTTTCATTT | GCTGCTGGCT | CTCAGCGTGG | CACTGTTGCA | GGCGGTGTTA | ATACTGACCG | 4920 |
| 4921 | CCTCACCTCT | GTTTTATCTT | CTGCTGGTGG | TTGTTCCGGT | ATTTTTAATG | GCGATGTTTT | 4980 |
| 4981 | AGGGCTATCA | GTTTCGCGCAT | TAAAGACTAA | TAGCCATTCA | AAAAATTTGT | CTGTGCCACG | 5040 |
| 5041 | TATTCTTACG | CTTTCAGGTC | AGAAGGGTTC | TATCTCTGTT | GGCCAGAATG | TCCCTTTTAT | 5100 |
| 5101 | TACTGGTTCG | GTGACTGGTG | AATCTGCCAA | TGTAATAAAT | CCATTTTCAGA | CGATTGAGCG | 5160 |
| 5161 | TCAAAATGTA | GGTATTTCCA | TGAGCGTTTT | TCCCTGTTGCA | ATGGCTGGCG | GTAATATTGT | 5220 |
| 5221 | TCTGGATATT | ACCAGCAAGG | CCGATAGTTT | GAGTTCTTCT | ACTCAGGCAA | GTGATGTTAT | 5280 |
| 5281 | TACTAATCAA | AGAAGTATTG | CTACAACGGT | TAATTTGCGT | GATGGACAGA | CTCTTTTACT | 5340 |
| 5341 | CGGTGGCCTC | ACTGATTATA | AAAACACTTC | TCAAGATTCT | GGCGTACCGT | TCCTGTCTAA | 5400 |
| 5401 | AATCCCTTTA | ATCGGCCCTC | TGTTTAGCTC | CCGCTCTGAT | TCCAACGAGG | AAAGCAGCTT | 5460 |
| 5461 | ATACGTGCTC | GTCAAAGCAA | CCATAGTACG | CGCCCTGTAG | CGGCGCATT | AGCGCGGCGG | 5520 |
| 5521 | GTGTGGTGGT | TACGCGCAGC | GTGACCGCTA | CACTTGCCAG | CGCCCTAGCG | CCGCTCCTT | 5580 |
| 5581 | TCGCTTTCTT | CCCTTCTCTT | CTCGCCACGT | TCGCGGCGTT | TCCCGTCAA | GCTCTAAATC | 5640 |
| 5641 | GGGGGCTCCC | TTTAGGGTTC | CGATTTAGTG | CTTTACGGCA | CCTCGACCCC | AAAAAACTTG | 5700 |
| 5701 | ATTTGGGTTG | TGGTTACGCT | AGTGGGCCAT | CGCCCTGATA | GACGGTTTTT | CGCCCTTTGA | 5760 |
| 5761 | CGTTGGAGTC | CACGTTCTTT | AATAGTGGAC | TCTTGTTCCA | AACTGGAACA | ACACTCAACC | 5820 |
| 5821 | CTATCTCGGG | CTATTCTTTT | GATTTATAAG | GGATTTTGCC | GATTTTCGGA | CCACCATCAA | 5880 |
| 5881 | ACAGGATTTT | CGCTGCTGG | GGCAAACGAG | CGTGGACCGC | TTGCTGCAAC | TCTCTCAGGG | 5940 |
| 5941 | CCAGGCGGTG | AAGGGCAATC | AGCTGTTGCC | CGTCTCGCTG | GTGAAAAGAA | AAACACCCCT | 6000 |

FIG. 5B

BEST AVAILABLE COPY

| | 1 | 10 | 20 | 30 | 40 | 50 | 60 | |
|------|------------|------------|------------|------------|-------------|------------|----|------|
| 6001 | GGCGCCCAAT | ACGCAAACCG | CCTCTCCCCG | CGCGTTGGCC | GATTCATTAA | TGCAGCTGGC | | 6060 |
| 6061 | ACGACAGGTT | TCCCGACTGG | AAAGCGGGCA | GTGAGCGCAA | CGCAATTAAT | GTGAGTTAGC | | 6120 |
| 6121 | TCACTCATT | GGCACCCAG | GCTTTACACT | TTATGCTTCC | GGCTCGTATG | TTGTGTGGAA | | 6180 |
| 6181 | TTGTGAGCGG | ATAACAATTT | CACACGCGTC | ACTTGGCACT | GGCCGTCGTT | TTACAACGTC | | 6240 |
| 6241 | GTGACTGGGA | AAACCCTGGC | GTTACCCAAG | CTTTGTACAT | GGAGAAAATA | AAGTGAACA | | 6300 |
| 6301 | AAGCACTATT | GCACTGGCAC | TCTTACCGTT | ACTGTTTACC | CCTGTGGCAA | AAGCCAGGT | | 6360 |
| 6361 | CCAGCTGCTC | GAGTCGGTCT | TCCCCTGGC | ACCCTCCTCC | AAGAGCACCT | CTGGGGGCAC | | 6420 |
| 6421 | AGCGGCCCTG | GGCTGCGCTG | TCAAGACTAA | TTCCCCGAAC | CGGTGACGGT | GTGCTGGAAC | | 6480 |
| 6481 | TCAGGCGCCC | TGACCAGCGG | CGTGACACCC | TTCCCGGCTG | TCCTACAGTC | CTCAGGACTC | | 6540 |
| 6541 | TACTCCCTCA | GCAGCGTGGT | GACCGTGCCC | TCCAGCAGCT | TGGGCACCCA | GACCTACATC | | 6600 |
| 6601 | TGCAACGTGA | ATCACAAGCC | CAGCAACACC | AAGGTGGACA | AGAAAAGCAGA | GCCCAATCT | | 6660 |
| 6661 | TGTAAGTAGT | GATCCTACCC | GTACGACGTT | CCGGACTACG | CTTCTTAGGC | TGAAGGCGAT | | 6720 |
| 6721 | GACCCTGCTA | AGGCTGCATT | CAATAGTTTA | CAGGCAAGTG | CTACTGAGTA | CATTGGCTAC | | 6780 |
| 6781 | GCTTGGGCTA | TGGTAGTAGT | TATAGTTGGT | GCTACCATAG | GGATTAATTT | ATTCAAAAAG | | 6840 |
| 6841 | TTTACGAGCA | AGGCTTCTTA | AGCAATAGCG | AAGAGGCCCG | CACCGATCGC | CCTTCCCAAC | | 6900 |
| 6901 | AGTTGCGCAG | CCTGAATGGC | GAATGGCGCT | TTGCCTGGTT | TCCGGCACCA | GAAGCGGTGC | | 6960 |
| 6961 | CGGAAAGCTG | GCTGGAGTGC | GATCTTCCTG | AGGCCGATAC | GGTCGTCGTC | CCCTCAAAC | | 7020 |
| 7021 | GGCAGATGCA | CGGTTACGAT | GCGCCCATCT | ACACCAACGT | AACCTATCCC | ATTACGGTCA | | 7080 |
| 7081 | ATCCGCCGTT | TGTTCCCACG | GAGAATCCGA | CGGGTTGTTA | CTCGCTCACA | TTTAATGTTG | | 7140 |
| 7141 | ATGAAAGCTG | GCTACAGGAA | GGCCAGACGC | GAATTATTTT | TGATGGCGTT | CCTATTGGTT | | 7200 |
| 7201 | AAAAAATGAG | CTGATTTAAC | AAAAATTTAA | CGCGAATTTT | AACAAAATAT | TAACGTTTAC | | 7260 |
| 7261 | AATTTAAATA | TTTGCTTATA | CAATCTTCCT | GTTTTTGGGG | CTTTTCTGAT | TATCAACCGG | | 7320 |
| 7321 | GGTACATATG | ATTGACATGC | TAGTTTTACG | ATTACCGTTC | ATCGATTCTC | TTGTTTGCTC | | 7380 |
| 7381 | CAGACTCTCA | GGCAATGACC | TGATAGCCTT | TGTAGATCTC | TCAAAAATAG | CTACCCTCTC | | 7440 |
| 7441 | CGGCATTAAT | TTATCAGCTA | GAACGGTTGA | ATATCATATT | GATGGTGATT | TGACTGTCTC | | 7500 |
| 7501 | CGGCCTTTCT | CACCCTTTTG | AATCTTTACC | TACACATTAC | TCAGGCATTG | CATTTAAAT | | 7560 |
| 7561 | ATATGAGGGT | TCTAAAAATT | TTTATCCTTG | CGTTGAAATA | AAGGCTTCTC | CCGCAAAAGT | | 7620 |
| 7621 | ATTACAGGGT | CATAATGTTT | TTGGTACAAC | CGATTTAGCT | TTATGCTCTG | AGGCTTTATT | | 7680 |
| 7681 | GCTTAATTTT | GCTAATTCTT | TGCCTTGCCT | GTATGATTTA | TTGGACGTT | | | 7729 |

FIG. 5C

| | 1 | 10 | 20 | 30 | 40 | 50 | 60 |
|------|-------------|------------|-------------|-------------|-------------|-------------|------|
| 1 | AATGCTACTA | CTATTAGTAG | AATTGATGCC | ACCTTTTCAG | CTCGGCCCC | AAATGAAAAT | 60 |
| 61 | ATAGCTAAAC | AGGTTATTGA | CCATTTGCGA | AATGTATCTA | ATGGTCAAAC | TAAATCTACT | 120 |
| 121 | CGTTCCGAGA | ATTGGGAATC | AACTGTTACA | TGGAATGAAA | CTTCCAGACA | CCGTACTTTA | 180 |
| 181 | GTTGCATATT | TAAAACATGT | TGAGCTACAG | CACCAGATTC | AGCAATTAAG | CTCTAAGCCA | 240 |
| 241 | TCTGCAAAAA | TGACCTCTTA | TCAAAAGGAG | CAATTAAGG | TACTCTCTAA | TCCTGACCTG | 300 |
| 301 | TTGGAGTTTG | CTTCCGGTCT | GGTTCGCTTT | GAAGCTCGAA | TTAAACGCG | ATATTTGAAG | 360 |
| 361 | TCTTTCGGGC | TTCTCTTTAA | TCTTTTTGAT | GCAATCCGCT | TTGCTTCTGA | CTATAATAGT | 420 |
| 421 | CAGGGTAAAG | ACCTGATTTT | TGATTTATGG | TCATTCTCGT | TTTCTGAAC | GTTTAAAGCA | 480 |
| 481 | TTTGAGGGGG | ATTCAATGAA | TATTTATGAC | GATTCGCGAG | TATTGGACGC | TATCCAGTCT | 540 |
| 541 | AAACATTTTA | CTATTACCCC | CTCTGGCAAA | ACTTCTTTTG | CAAAAGCCTC | TCGCTATTTT | 600 |
| 601 | GGTTTATATC | GTCGTCTGGT | AAACGAGGGT | TATGATAGTG | TTGCTCTTAC | TATGCCTCGT | 660 |
| 661 | AATGCTTTT | GGCGTTATGT | ATCTGCATTA | TTTGAATGTG | GTATTCCTAA | ATCTCAACTG | 720 |
| 721 | ATGAATCTTT | CTACCTGTAA | TAATGTTGTT | CCGTTAGTTC | GTTTTATTAA | CGTAGATTTT | 780 |
| 781 | TCTTCCCAAC | GTCCTGACTG | GTATAATGAG | CCAGTTCTTA | AAATCGCATA | AGGTAATTCA | 840 |
| 841 | CAATGATTAA | AGTTGAAATT | AAACCATCTC | AAGCCCAATT | TACTACTCGT | TCTGGTGT | 900 |
| 901 | CTCGTCAGGG | CAAGCCTTAT | TCAGTGAATG | AGCAGCTTTG | TTACGTTGAT | TTGGGTAATG | 960 |
| 961 | AATATCCGGT | TCTTGTCGAG | ATTACTCTTG | ATGAAGGTCA | GCCAGCCTAT | GCGCCTGGTC | 1020 |
| 1021 | TGTACACCGT | TCTCTGTGCC | TCTTTCAAAG | TTGGTCAGTT | CGGTTCCCTT | ATGATTGACC | 1080 |
| 1081 | GTCTGCGCCT | CGTTCGGGCT | AAGTAACATG | GAGCAGGTCT | CGGATTTCTGA | CACAAATTTT | 1140 |
| 1141 | CAGGCGATGA | TACAAATCTC | CGTTGTACTT | TGTTTCGCGC | TTGGTATAAT | CGCTGGGGGT | 1200 |
| 1201 | CAAAGATGAG | TGTTTTAGTG | TATTTCTTCG | CCTCTTTCGT | TTTAGGTTGG | TGCCTTCGTA | 1260 |
| 1261 | GTGGCATTAC | GTATTTTACC | CGTTTAAATG | AAACTTCCTC | ATGAAAAAGT | CTTTAGTCCT | 1320 |
| 1321 | CAAAGCCTCT | GTAGCCGTTG | CTACCCCTCG | TCCGATGCTG | TCTTTTCGCTG | CTGAGGGTGA | 1380 |
| 1381 | CGATCCCGCA | AAAGCGGCGT | TAACTCCCTT | GCAAGCCTCA | GCGACCGAAT | ATATCGGTTA | 1440 |
| 1441 | TGCGTGGGCG | ATGGTTGTTG | TCATTGTCGG | CGCAACTATC | GGTATCAAGC | TGTTTAAAGAA | 1500 |
| 1501 | ATTACCTCTG | AAAGCAAGCT | GATAAACCGA | TACAATTAATA | GGCTCCTTTT | GGAGCCTTTT | 1560 |
| 1561 | TTTTTGAGAG | TTTTCAACGT | GAATAAATTA | TTATTCGCAA | TTCTTTTAGT | TGTTCTTTTC | 1620 |
| 1621 | TATTTCTCACT | CCGCTGAAC | TGTTGAAGT | TGTTTAGCAA | AACCCATAC | AGAAAAATCA | 1680 |
| 1681 | TTTACTAACG | TCTGGAAGAG | CGACAAACT | TTAGATCGTT | ACGCTAATA | TGAGGGTTGT | 1740 |
| 1741 | CTGTGGAATG | CTACAGGCGT | TGTAGTTTGT | ACTGGTGACG | AAACTCAGTG | TTACGGTACA | 1800 |
| 1801 | TGGGTTCCCTA | TTGGGCTTGC | TATCCCTGAA | AATGAGGGTG | GTGGCTCTGA | GGGTGGCGGT | 1860 |
| 1861 | TCTGAGGGTG | GCGGTTCTGA | GGGTGGCGGT | ACTAAACCTC | CTGAGTACGG | TGATACACCT | 1920 |
| 1921 | ATTCCGGGCT | ATACTTATAT | CAACCTCTC | GACGGCACTT | ATCCGCTGG | TACTGAGCAA | 1980 |
| 1981 | AACCCGCTA | ATCCTAATCC | TTCTCTTGAG | GAGTCTCAGC | CTCTTAATAC | TTTCATGTTT | 2040 |
| 2041 | CAGAATAATA | GGTTCCGAAA | TAGGCAGGGG | GCATTAAGTG | TTTATACGGG | CACTGTTACT | 2100 |
| 2101 | CAAGGCACTG | ACCCCGTTAA | AACTTATTAC | CAGTACACTC | CTGTATCATC | AAAAGCCATG | 2160 |
| 2161 | TATGACGCTT | ACTGGAACGG | TAAATTCAGA | GAATGCGCTT | TCCATTCTGG | CTTTAATGAA | 2220 |
| 2221 | GATCCATTCTG | TTTGTGAATA | TCAAGGCCAA | TCGTCTGACC | TGCCTCAACC | TCCTGTCAAT | 2280 |
| 2281 | GCTGGCGGCG | GCTCTGGTGG | TGGTTCTGGT | GGCGGCTCTG | AGGGTGGTGG | CTCTGAGGGT | 2340 |
| 2341 | GGCGGTTCTG | AGGGTGGCGG | CTCTGAGGGA | GGCGGTTCCG | GTGGTGGCTC | TGGTTCCGGT | 2400 |
| 2401 | GATTTTGATT | ATGAAAAGAT | GGCAAACGCT | AATAAGGGGG | CTATGACCGA | AAATGCCGAT | 2460 |
| 2461 | GAAGACGCGC | TACAGTCTGA | CGCTAAAGGG | AAACTTGATT | CTGTCGCTAC | TGATTACGGT | 2520 |
| 2521 | GCTGCTATCG | ATGGTTTCAT | TGGTGACGTT | TCCGGCCTTG | CTAATGGTAA | TGGTGCTACT | 2580 |
| 2581 | GGTGATTTTG | CTGGCTCTAA | TTCCCAATATG | GCTCAAGTCG | GTGACGGTGA | TAATTCACCT | 2640 |
| 2641 | TTAATGAATA | ATTTCCGTCA | ATATTTACCT | TCCCTCCCTC | AATCGGTTGA | ATGTCGCCCT | 2700 |
| 2701 | TTTGTCTTTA | GCGCTGGTAA | ACCATATGAA | TTTTCTATTG | ATTGTGACAA | AATAAATCTA | 2760 |
| 2761 | TTCCGTGGTG | TCTTTGCGTT | TCTTTTATAT | GTTGCCACCT | TTATGTATGT | ATTTTCTACG | 2820 |
| 2821 | TTTGCTAACA | TACTGCGTAA | TAAGGAGTCT | TAATCATGCC | ATGGCTTTTG | GGTATTCGGT | 2880 |
| 2881 | TATTATTGCG | TTTCTCTGGT | TTCTTCTGG | TAACCTTTGT | CGGCTATCTG | CTTACTTTTC | 2940 |
| 2941 | TAAAAAGGG | CTTCGGTAAG | ATAGCTATTG | CTATTTTCATT | GTTTCTTGCT | CTTATTATTG | 3000 |

FIG. 6A

| | 1 | 10 | 20 | 30 | 40 | 50 | 60 | |
|------|-------------|-------------|-------------|-------------|-------------|-------------|------|--|
| 3001 | GGCTTAACTC | AATTCTTG | GGTTATCTCT | CTGATATTAG | CGCTCAATT | CCCTCTGACT | 3060 | |
| 3061 | TTGTTTCAGGG | TGTTTCAGTTA | ATTCTCCCGT | CTAATGCGCT | TCCCTGTTTT | TATGTTATTC | 3120 | |
| 3121 | TCTCTGTAAA | GGCTGCTATT | TTTCAATTTTG | ACGTTAAACA | AAAAATCGTT | TCTTATTTTG | 3180 | |
| 3181 | ATTGGGATAA | ATAATATGGC | TGTTTTATTTT | GTAAGTGGCA | AATTAGGCTC | TGGAAAGACG | 3240 | |
| 3241 | CTCGTTAGCG | TTGGTAAGAT | TCAGGATAAA | ATTGTAGCTG | GGTGCAAAAT | AGCAACTAAT | 3300 | |
| 3301 | CTTGATTTAA | GGCTTCAAAA | CCTCCCGCAA | GTCGGGAGGT | TCGCTAAAAAC | GCCTCGCGTT | 3360 | |
| 3361 | CTTAGAATAC | CGGATAAGCC | TTCTATATCT | GATTTGCTTG | CTATTGGGCG | CGGTAATGAT | 3420 | |
| 3421 | TCCTACGATG | AAAATAAAAA | CGGCTTGCTT | GTTCTCGATG | AGTGCGGTAC | TTGGTTTAAT | 3480 | |
| 3481 | ACCCGTTCTT | GGAATGATAA | GGAAAGACAG | CCGATTATTG | ATTGGTTTCT | ACATGCTCGT | 3540 | |
| 3541 | AAATTAGGAT | GGGATATTAT | TTTTCTTGTT | CAGGACTTAT | CTATTGTTGA | TAAACAGGCG | 3600 | |
| 3601 | CGTTCTGCA | TAGCTGAACA | TGTTGTTTAT | TGTCGTGCTC | TGGACAGAAT | TACTTTACCT | 3660 | |
| 3661 | TTTGTCGGTA | CTTTATAATC | TCTTATTACT | GGCTCGAAAA | TGCCTCTGCC | TAAATTACAT | 3720 | |
| 3721 | GTTGGCGTTG | TTAAATATGG | CGATTCTCAA | TTAAGCCCTA | CTGTTGAGCG | TTGGCTTTAT | 3780 | |
| 3781 | ACTGGTAAGA | ATTTGTATAA | CGCATATGAT | ACTAAACAGG | CTTTTCTAG | TAATTATGAT | 3840 | |
| 3841 | TCCGGTGTTT | ATTCTTATTT | AACGCCCTAT | TTATCACACG | GTCGGTATTT | CAAACCATTA | 3900 | |
| 3901 | AATTTAGGTC | AGAAGATGAA | GCTTACTAAA | ATATATTTGA | AAAAGTTTTC | ACGCGTTCTT | 3960 | |
| 3961 | TGCTTTGCGA | TTGGATTGCG | ATCAGCATTT | ACATATAGTT | ATATAACCCA | ACCTAAGCCG | 4020 | |
| 4021 | GAGGTTAAAA | AGGTAGTCTC | TCAGACCTAT | GATTTTGATA | AATTCACAT | TGACTCTTCT | 4080 | |
| 4081 | CAGCGTCTTA | ATCTAAGCTA | TCGCTATGTT | TTCAAGGATT | CTAAGGGAAA | ATTAATTAAT | 4140 | |
| 4141 | AGCGACGATT | TACAGAAGCA | AGGTTATTCA | CTCACATATA | TTGATTTATG | TACTGTTTCC | 4200 | |
| 4201 | ATTAATAAAG | GTAATCAAA | TGAAATTGTT | AAATGTAATT | AATTTTGTTT | TCTTGATGTT | 4260 | |
| 4261 | TGTTTCATCA | TCTTCTTTTG | CTCAGGTAA | TGAAATGAAT | AATTCGCTC | TGCGCGATTT | 4320 | |
| 4321 | TGTAACCTGG | TATTCAAAGC | AATCAGGCGA | ATCCGTTATT | GTTTCTCCCG | ATGTAAGAGG | 4380 | |
| 4381 | TACTGTTACT | GTATATTCA | CTGACGTTAA | ACCTGAAAT | CTACGCAATT | TCTTTATTTT | 4440 | |
| 4441 | TGTTTTACGT | GCTAATAATT | TTGATATGGT | TGGTTCAATT | CCTTCCATAA | TTCAGAAGTA | 4500 | |
| 4501 | TAATCCAAAC | AATCAGGATT | ATATTGATGA | ATTGCCATCA | TCTGATAATC | AGGAATATGA | 4560 | |
| 4561 | TGATAATTCC | GCTCCTTCTG | GTGGTTTCTT | TGTTCCGCAA | AATGATAATG | TTACTCAAAC | 4620 | |
| 4621 | TTTTAAATTT | AATAACGTTT | GGGCAAGGGA | TTTAATACGA | GTTGTGCAAT | TGTTTGTAAG | 4680 | |
| 4681 | GTCTAATACT | TCTAAATCCT | CAAATGTATT | ATCTATTGAC | GGCTCTAATC | TATTGTTTGT | 4740 | |
| 4741 | TAGTGCACCT | AAAGATATTT | TAGATAACCT | TCTCAATTC | CTTTCTACTG | TTGATTTGCC | 4800 | |
| 4801 | AACTGACCAG | ATATTGATTG | AGGGTTTGT | ATTTGAGGTT | CAGCAAGGTG | ATGCTTTAGA | 4860 | |
| 4861 | TTTTTCATTT | GCTGCTGGCT | CTCAGCGTGG | CACCTGTTGCA | GGCGGTGTTA | ATACTGACCG | 4920 | |
| 4921 | CCTCACCTCT | GTTTTATCTT | CTGCTGGTGG | TTCGTTCCGT | ATTTTTAATG | GCGATGTTTT | 4980 | |
| 4981 | AGGGCTATCA | GTTTCGCGAT | TAAAGACTAA | TAGCCATTCA | AAAATATTGT | CTCTGCCACG | 5040 | |
| 5041 | TATTCTTACG | CTTTCAGGTC | AGAAGGGTTC | TATCTCTGTT | GGCCAGAAATG | TCCCTTTTAT | 5100 | |
| 5101 | TACTGGTTCGT | GTGACTGGTG | AATCTGCCAA | TGTAATAAAT | CCATTTTCAGA | CGAATTGAGCG | 5160 | |
| 5161 | TCAAAATGTA | GGTATTTC | TGAGCGTTTT | TCCTGTTGCA | ATGGCTGGCG | GTAATATTGT | 5220 | |
| 5221 | TCTGGATATT | ACCAGCAAGG | GCGATAGTTT | GAGTTCTTCT | ACTCAGGCAA | GTGATGTTAT | 5280 | |
| 5281 | TACTAATCAA | AGAAGTATTG | CTACAACGGT | TAATTTGCGT | GATGGACAGA | CTCTTTTACT | 5340 | |
| 5341 | CGTGCGCCTC | ACTGATTATA | AAAACACTTC | TCAAGATTCT | GGCGTACCGT | TCCTGTCTAA | 5400 | |
| 5401 | AATCCCTTTA | ATCGGCTTCC | TGTTTAGCTC | CCGCTCTGAT | TCCAACGAGG | AAAGCACGTT | 5460 | |
| 5461 | ATACGTGCTC | GTCAAAGCAA | CCATAGTACG | CGCCCTGTAG | CGGCGCATT | AGCGCGCGCG | 5520 | |
| 5521 | GTGTGGTGGT | TACGCGCAGC | GTGACCGCTA | CACCTTGCCAG | CGCCCTAGCG | CCCGCTCCTT | 5580 | |
| 5581 | TCGCTTTCTT | CCCTTCTTTT | CTCGCCACGT | TCGCGGCTT | TCCCGCTCAA | GCTCTAAATC | 5640 | |
| 5641 | GGGGGCTCCC | TTTAGGGTTC | CGATTTAGTG | CTTTACGGCA | CCTCGACCCC | AAAAAATCTG | 5700 | |
| 5701 | ATTGGGGTGA | TGGTTCACGT | AGTGGGCCAT | CGCCCTGATA | GACGGTTTTT | CGCCCTTTGA | 5760 | |
| 5761 | CGTTGGAGTC | CACGTTCTTT | AATAGTGGAC | TCTTGTTCCA | AACTGGAACA | ACACTCAACC | 5820 | |
| 5821 | CTATCTCGGG | CTATTCTTTT | GATTTATAAG | GGATTTTGCC | GATTTTCGGA | CCACCATCAA | 5880 | |
| 5881 | ACAGGATTTT | CGCCTGCTGG | GGCAAACCG | CGTGGACCGC | TTGCTGCAAC | TCTCTCAGGG | 5940 | |
| 5941 | CCAGGCGGTG | AAGGGCAATC | AGCTGTTGCC | CGTCTCGCTG | GTGAAAAGAA | AAACCACCT | 6000 | |

FIG. 6B

| | 10 | 20 | 30 | 40 | 50 | 60 | |
|------|------------|------------|------------|------------|------------|-------------|------|
| 6001 | GGCGCCCAAT | ACGCAAACCG | CCTCTCCCCG | CGCGTTGGCC | GATTCAITAA | TGCAGCTGGC | 6050 |
| 6061 | ACGACAGGTT | TCCCGACTGG | AAAGCGGGCA | GTGAGCGCAA | CGCAATTAAT | GTGAGTTAGC | 6120 |
| 6121 | TCACTCATT | GGCACCACAG | GCTTTACACT | TTATGCTTCC | GGCTCGTATG | TTGTGTGGAA | 6180 |
| 6181 | TTGTGAGCGG | ATAACAATTT | CACACGCCAA | GGAGACAGTC | ATAATGAAAT | ACCTATTGCC | 6240 |
| 6241 | TACGGCAGCC | GCTGGATTGT | TATTAATCGC | TGCCCAACCA | GCCATGGCCG | AGCTCTTCCC | 6300 |
| 6301 | GCCATCTGAT | GAGCAGTTGA | AATCTGGAAC | TGCCTCTGTT | GTGTGCCTGC | TGAATAACTT | 6360 |
| 6361 | CTATCCCAGA | GAGGCCAAAG | TACAGTGGAA | GGTGGATAAC | GCCCTCCAAT | CGGGTAACTC | 6420 |
| 6421 | CCAGGAGAGT | GTCACAGAGC | AGGACAGCAA | GGACAGCACC | TACAGCCTCA | GCAGCACCCT | 6480 |
| 6481 | GAGCGTGAGC | AAAGCAGACT | ACGAGAAACA | CAAAGTCTAC | GCCTGCGAAG | TCACCCATCA | 6540 |
| 6541 | GGGCCTGAGC | TCGCCCGTCA | CAAAGAGCTT | CAACAGGGGA | GAGTGTCTTA | GAACCGCTGA | 6600 |
| 6601 | CTTGGCACTG | GCCGTCGTTT | TACAACGTCG | TGACTGGGAA | AACCCTGGCG | TTACCCAAGC | 6660 |
| 6661 | TTTGTACATG | GAGAAAATAA | AGTGAACAAA | AGCACTATTG | CACTGGCACT | CTTACCGTTA | 6720 |
| 6721 | CTGTTTACCC | CTGTGGCAAA | AGCCGCCTCC | ACCAAGGGCC | CATCGGTCTT | CCCCCTGGCA | 6780 |
| 6781 | CCCTCCTCCA | AGAGCACCTC | TGGGGGCACA | CGCGCCCTGG | GCTGCCTGGT | CAAGACTAAT | 6840 |
| 6841 | TCCCGCAACC | GGTGACGGTG | TCGTGGAAC | CAGGCGCCCT | GACCAAGCGG | GTGCACACCT | 6900 |
| 6901 | TCCCGGCTGT | CCTACAGTCC | TCAGGACTCT | ACTCCCTCAG | CAGCGTGGTG | ACCGTGCCCT | 6960 |
| 6961 | CCAGCAGCTT | GGGCACCCAG | ACCTACATCT | GCAACGTGAA | TCACAAGCCC | AGCAACACCA | 7020 |
| 7021 | AGGTGGACAA | GAAAGCAGAG | CCCAAATCTT | GTACTAGTGG | ATCCTACCCC | TACGACGTTT | 7080 |
| 7081 | CGGACTACGC | TTCTTAGGCT | GAAGGCGATG | ACCCTGCTAA | GGCTGCATTC | AATAGTTTAC | 7140 |
| 7141 | AGGCAAGTGC | TACTGAGTAC | ATTGGCTACG | CTTGGGCTAT | GGTAGTAGTT | ATAGTTGGTG | 7200 |
| 7201 | CTACCATAGG | GATTAATAAT | TTCAAAAAGT | TTACGAGCAA | GGCTTCTTAA | GCAATAGCGA | 7260 |
| 7261 | AGAGGCCCGC | ACCGATCGCC | CTTCCCAACA | GTTGCGCAGC | CTGAATGGCG | AATGGCGCTT | 7320 |
| 7321 | TGCCTGGTTT | CCGGCACCAG | AAGCGGTGCC | GGAAAGCTGG | GTGGAGTGCG | ATCTTCTCTG | 7380 |
| 7381 | GGCCGATACG | GTCTGCTGCC | CCTCAAAC | GCAGATGCAC | GGTTACGATG | CGCCCATCTA | 7440 |
| 7441 | CACCAACGTA | ACCTATCCCA | TTACGGTCAA | TCCGCCGTTT | GTTCCACCGG | AGAATCCGAC | 7500 |
| 7501 | GGGTTGTTAC | TCGCTCACAT | TTAATGTTGA | TGAAAGCTGG | CTACAGGAAG | GCCAGACGCG | 7560 |
| 7561 | AATTATTTTT | GATGGCGTTC | CTATTGGTTA | AAAAATGAGC | TGATTTAACA | AAAAATTAAC | 7620 |
| 7621 | GCGAATTTTA | ACAAAATATT | AACGTTTACA | ATTTAAATAT | TTGCTTATAC | AATCTTCTCT | 7680 |
| 7681 | TTTTTGGGGC | TTTTCTGATT | ATCAACCGGG | GTACATATGA | TTGACATGCT | AGTTTTACGA | 7740 |
| 7741 | TTACCGTTCA | TCGATTCTCT | TGTTTGCTCC | AGACTCTCAG | GCAATGACCT | GATAGCCTTT | 7800 |
| 7801 | GTAGATCTCT | CAAAAATAGC | TACCCTCTCC | GGCATTAAAT | TATCAGCTAG | AACGGTTGAA | 7860 |
| 7861 | TATCATATTG | ATGGTGATTT | GACTGTCTCC | GGCCTTTCTC | ACCCTTTTGA | ATCTTTACCT | 7920 |
| 7921 | ACACATTACT | CAGGCATTGC | ATTTAAATAA | TATGAGGGTT | CTAAAAATTT | TTATCCTTGC | 7980 |
| 7981 | GTTGAAATAA | AGGCTTCTCC | CGCAAAAGTA | TTACAGGGTC | ATAATGTTTT | TGGTACAACC | 8040 |
| 8041 | GATTTAGCTT | TATGCTCTGA | GGCTTTATTG | CTTAATTTTG | CTAATTCCTT | GCCTTGCCCTG | 8100 |
| 8101 | TATGATTTAT | TGGACGTT | | | | | 8118 |

FIG. 6C

BEST AVAILABLE COPY